

# MathStep 3



**Students' Book**

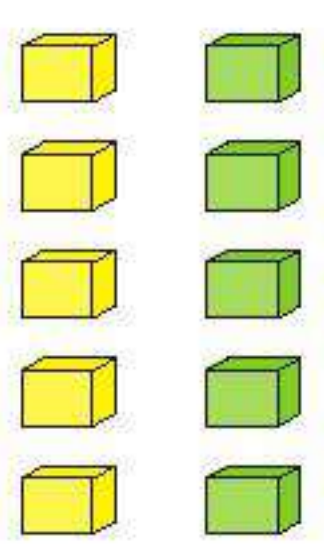
**Solutions**

**Unit  
1**

**Numbers to 10,000**

**Recap Exercise**

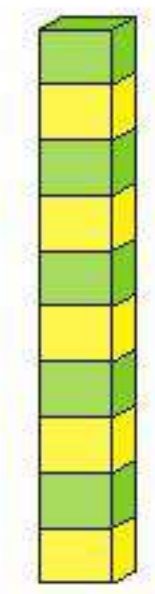
**Recap - Counting to 1000**



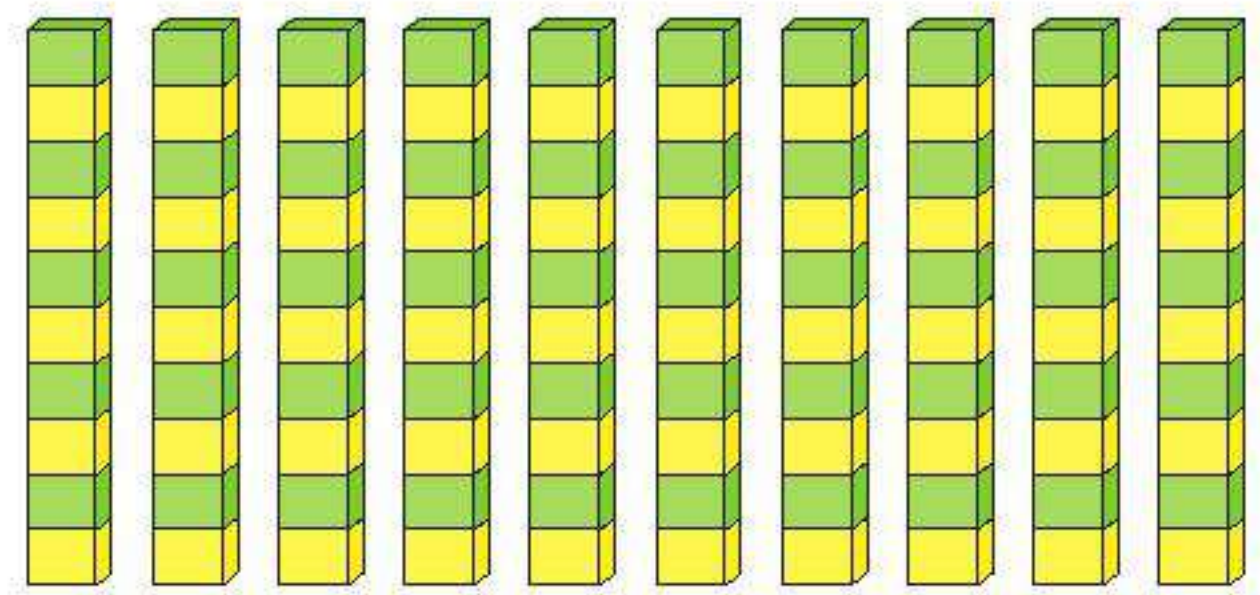
10 ones



make



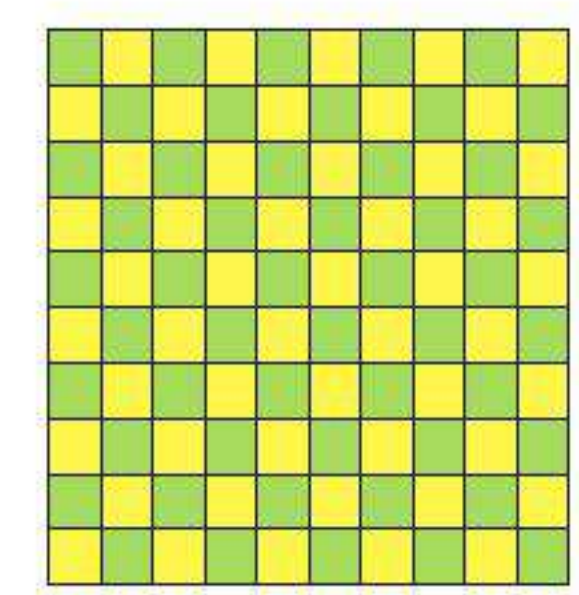
1 ten



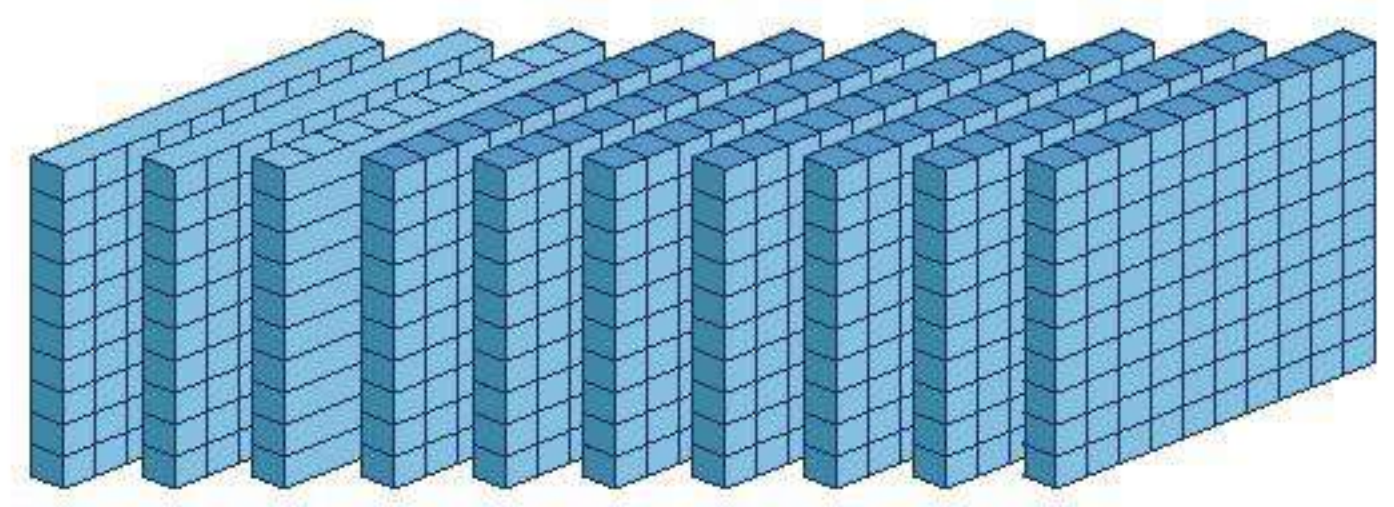
10 tens



make



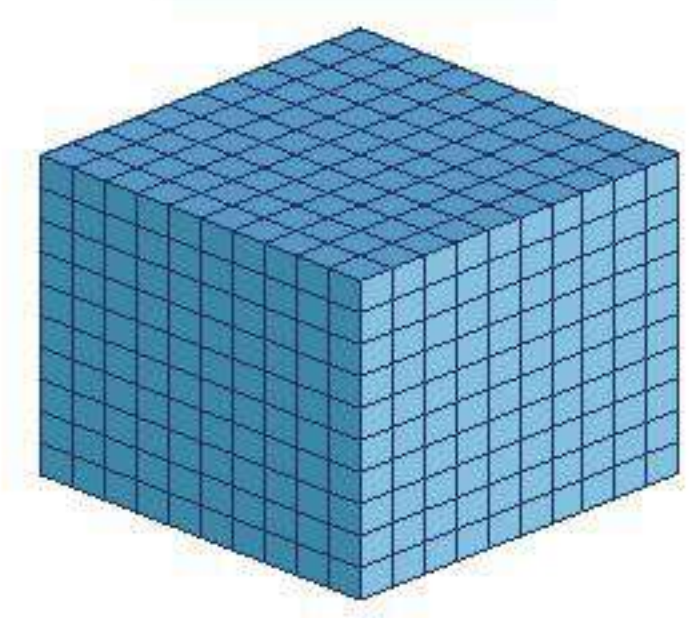
1 hundred



10 hundreds



make



1 thousand

1. Fill in the blanks.

a)  $419 = 4$  hundreds 1 ten and 9 ones.

b)  $322 = 3$  hundreds  $2$  tens and 2 ones.

c)  $619 = 6$  hundred  $1$  ten and  $9$  ones.

d)  $555 = 5$  hundreds  $5$  tens and 5 ones.

e)  $743 = 7$  hundreds  $4$  tens and  $3$  ones.

2. Compare the numbers. Write  $<$  or  $>$  in the box.

a	137	$<$	334	b	137	$<$	137
c	802	$>$	788	d	220	$<$	220
e	610	$<$	669	f	541	$>$	541

3. Arrange the numbers in ascending order.

a	493	159	357	609	520
	159	357	493	520	609

b	724	481	528	630	372
	372	481	528	630	724

c	600	200	190	333	188
	188	190	200	333	600

4. Arrange the numbers in descending order.

a	300	502	190	666	299
	666	502	300	299	190

b	845	428	113	746	229
	845	746	428	229	113

c	419	448	126	489	450
	489	450	448	419	126

**Exercise 1****1. Convert the Roman numerals to common numbers.**

a)  $V = 5$

b)  $XX = 20$

c)  $IX = 9$

d)  $XI = 11$

e)  $XIII = 13$

f)  $XIX = 19$

g)  $VIII = 8$

h)  $III = 3$

**2. Convert to Roman numbers.**

a)  $17 = XVII$

b)  $18 = XVIII$

c)  $4 = IV$

d)  $6 = VI$

e)  $9 = IX$

f)  $14 = XIV$

g)  $13 = XII$

h)  $11 = XI$

## Exercise 2

1. Match the numbers to the correct words.

a 1118 two thousand five hundred and sixty-eight

b 6311 one thousand seven hundred and forty-three

c 2568 four thousand three hundred

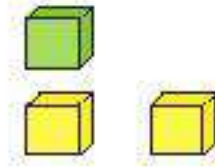
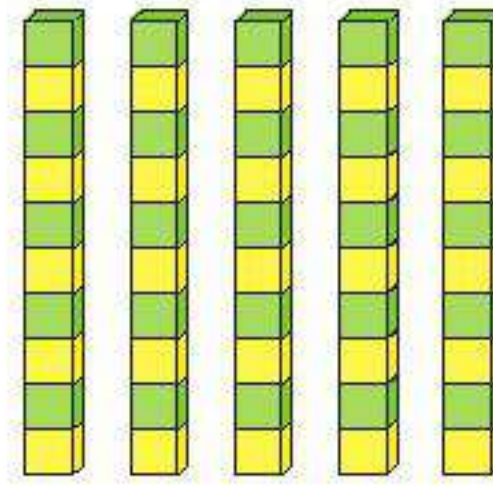
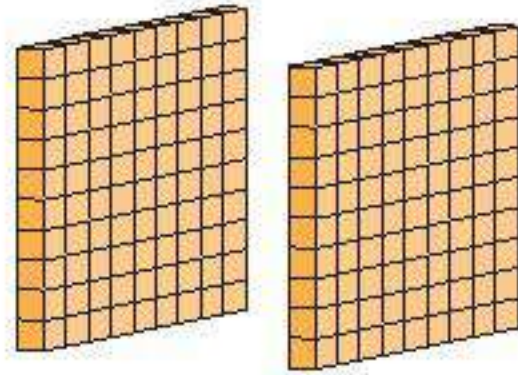
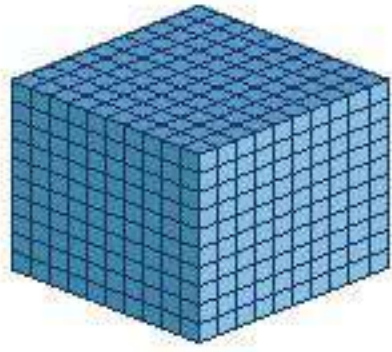
d 1743 one thousand one hundred and eighteen

e 3105 six thousand three hundred and eleven

f 4300 three thousand one hundred and five

2. Count the cubes and write in numbers and words.

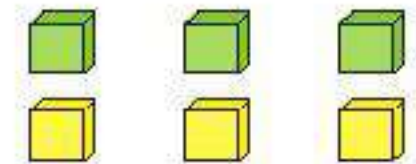
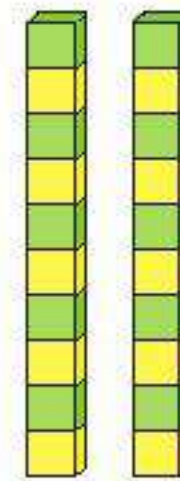
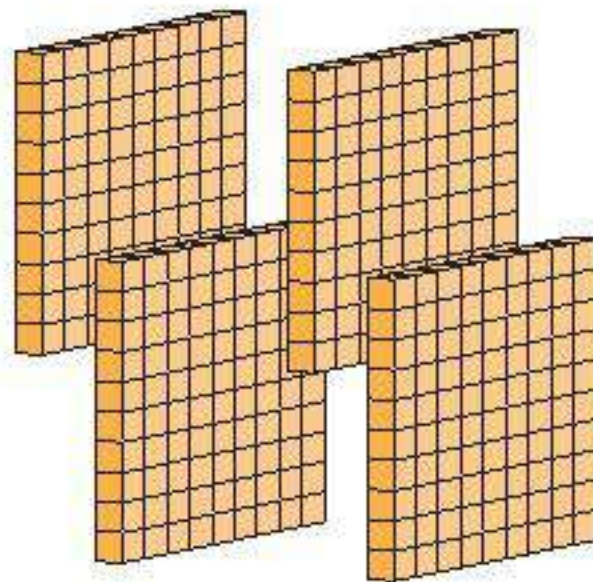
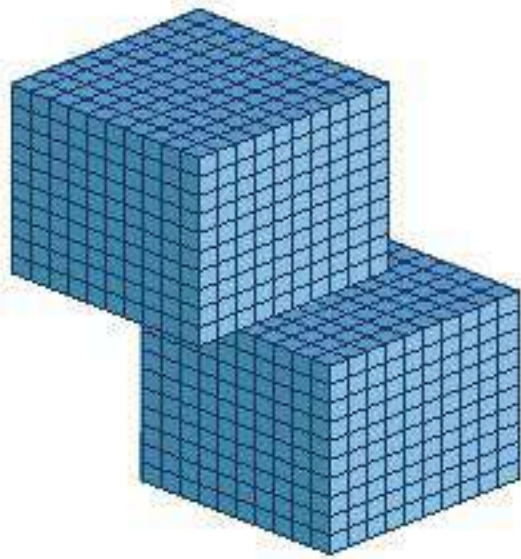
a



1253

one thousand two hundred and fifty-three

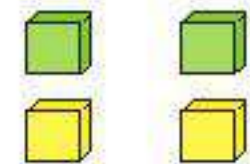
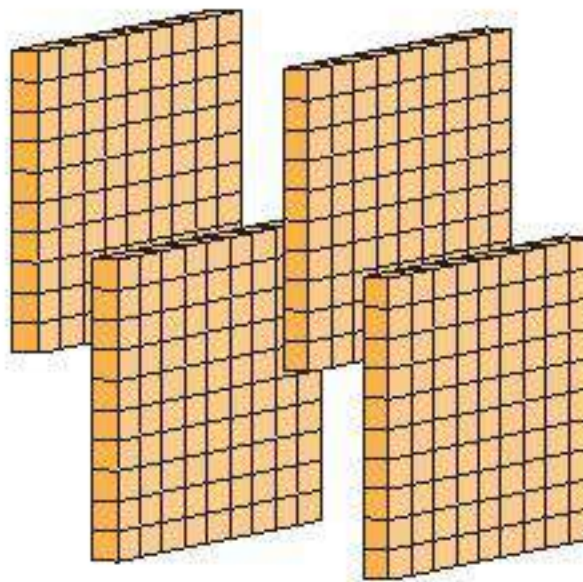
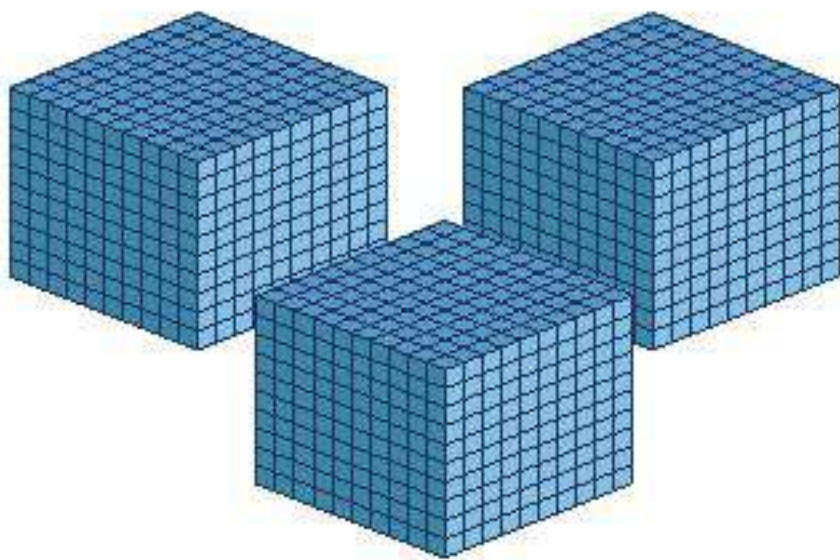
b



2426

two thousand four hundred and twenty six

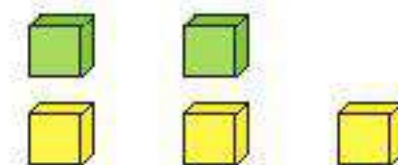
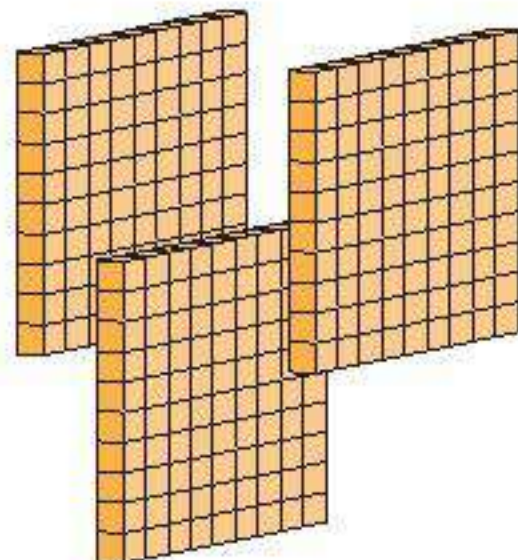
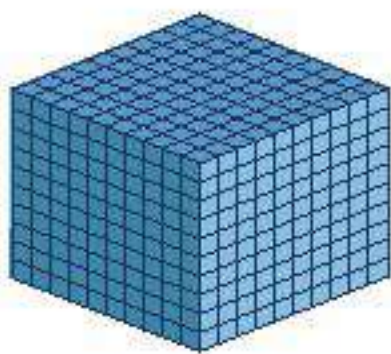
c



3414

three thousand four hundred and fourteen

d



1305

one thousand three hundred and five

**3. Fill in the blanks.**

a)  $2364 = 2$  thousands 3 hundreds 6 tens and 4 ones.

b)  $1219 = 1$  thousand  $2$  hundreds 1 ten and  $9$  ones.

c)  $2740 = 2$  thousands  $7$  hundreds  $4$  tens and  $0$  ones.

d)  $3847 = 3$  thousands  $8$  hundreds  $4$  tens and  $7$  ones.

e)  $5590 = 5$  thousands  $5$  hundreds  $9$  tens and  $0$  ones.

f)  $7302 = 7$  thousands  $3$  hundreds  $0$  tens and  $2$  ones.

**4. Fill in the blanks.**

a)

2	2	6	2
---	---	---	---

The digit  $2$  is in the thousands place.

The digit  $2$  is in the hundreds place.

The digit  $6$  is in the tens place.

The digit  $2$  is in the ones place.

b)

5	4	1	3
---	---	---	---

The digit  $1$  is in the tens place.

The digit  $3$  is in the ones place.

The digit  $4$  is in the hundreds place.

The digit  $5$  is in the thousands place.

c)

3	0	1	8
---	---	---	---

The digit 0 is in the hundreds place.

The digit 3 is in the thousands place.

The digit 1 is in the tens place.

The digit 8 is in the ones place.

d)

1	5	7	0
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The digit 7 is in the tens place.

The digit 0 is in the ones place.

The digit 5 is in the hundreds place.

The digit 1 is in the thousands place.

e)

6	2	9	2
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The digit 2 is in the ones place.

The digit 2 is in the hundreds place.

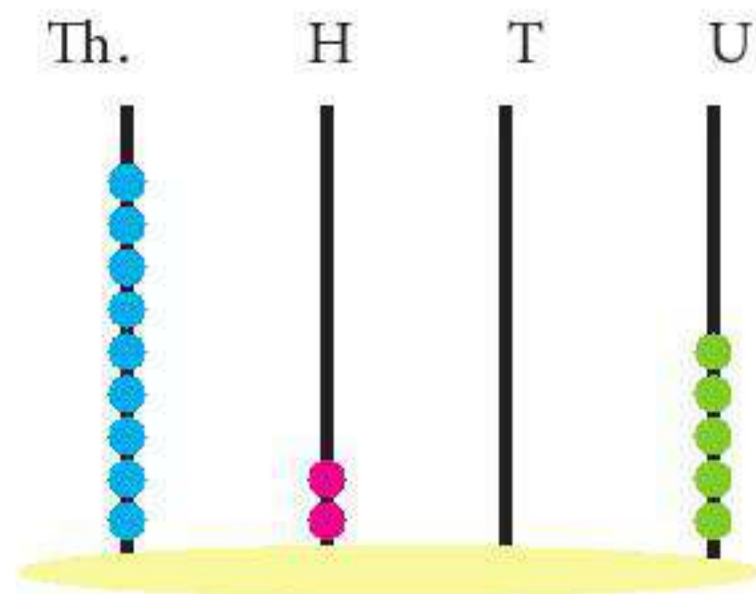
The digit 9 is in the tens place.

The digit 6 is in the thousands place.



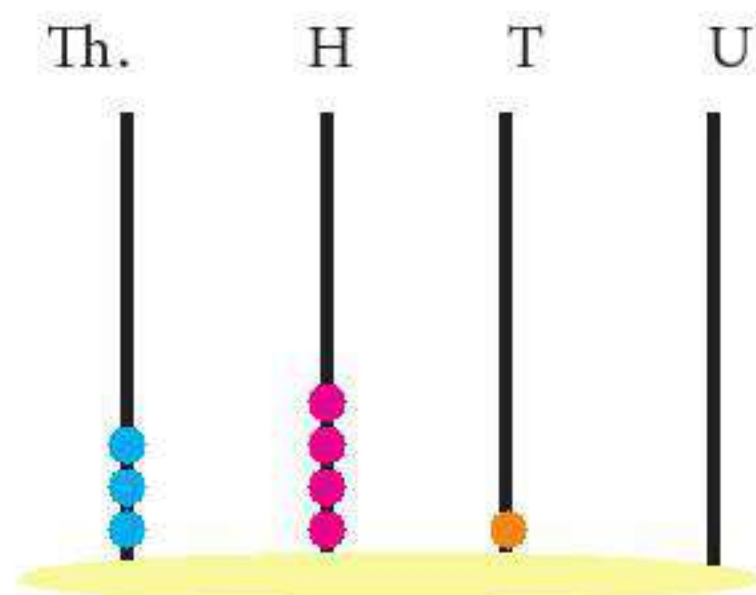
4. Draw beads on abacus to represent the numbers and then write the number in words.

a) 9205



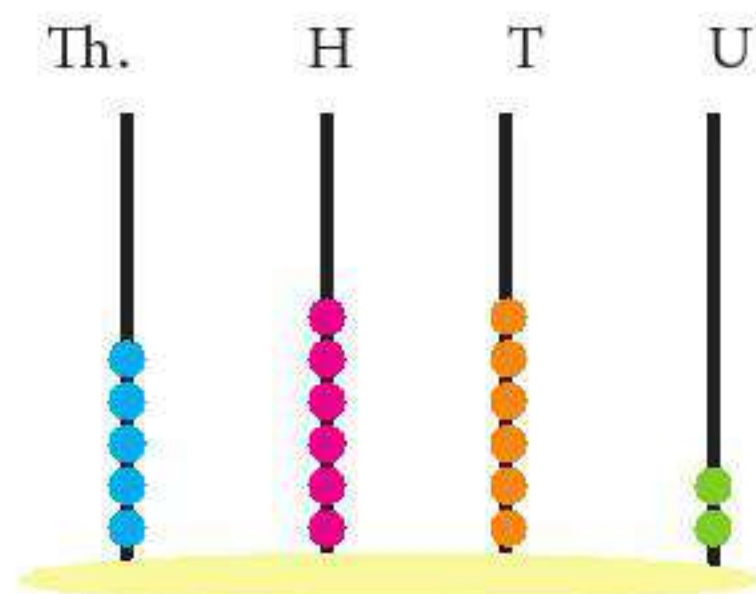
Nine thousand two hundred and five

b) 3410



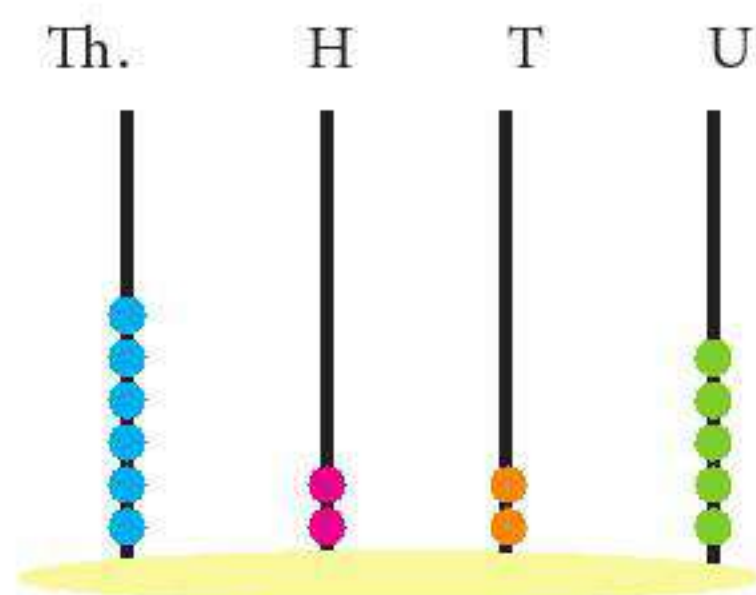
three thousand four hundred and ten

c) 5662



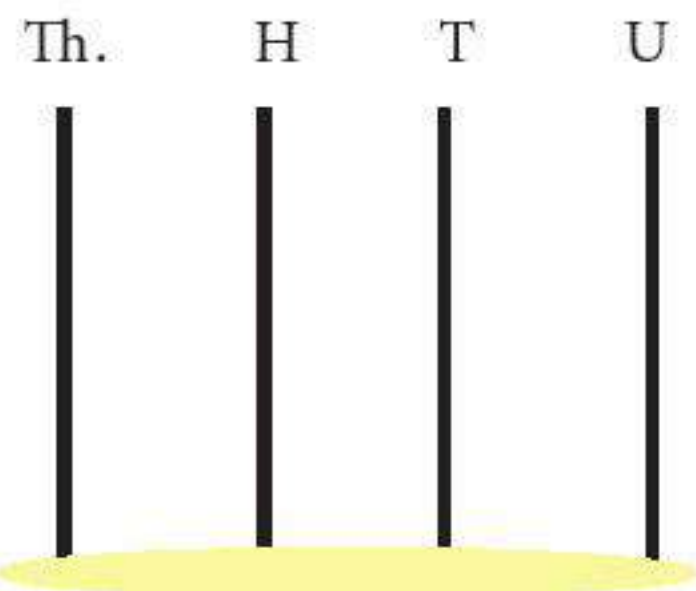
five thousand six hundred and sixty two

d) 6225



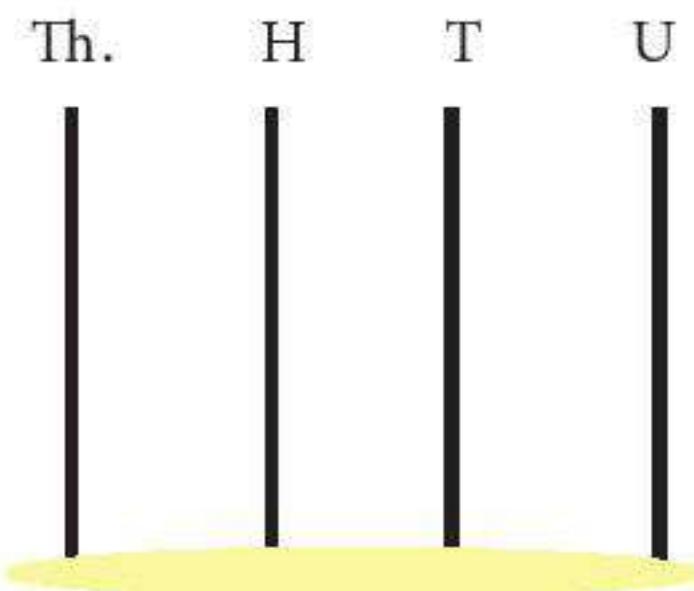
six thousand two hundred and twenty two

e) 7700



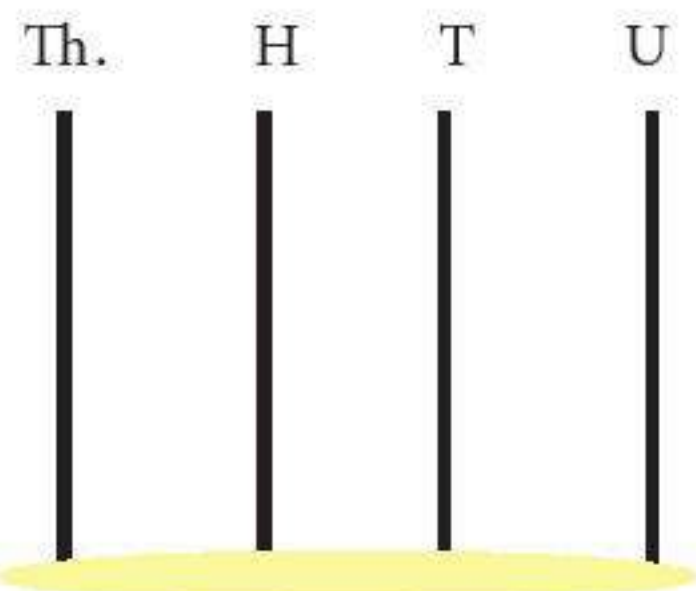

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f) 8500



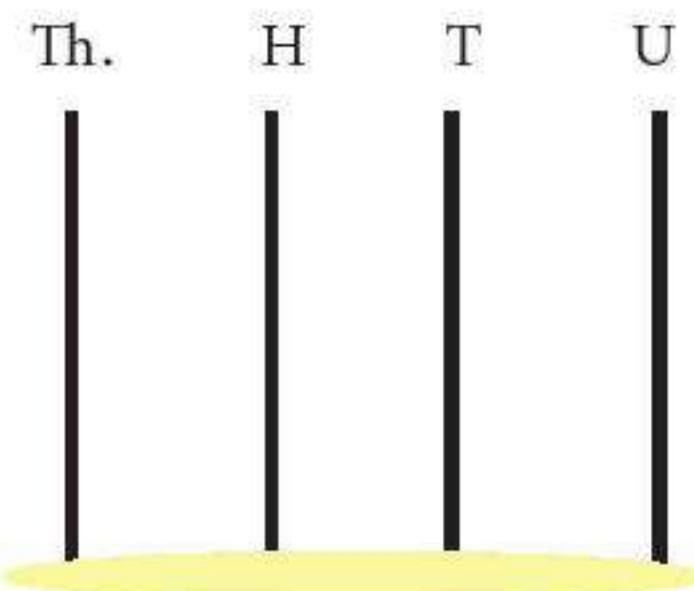

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g) 4335



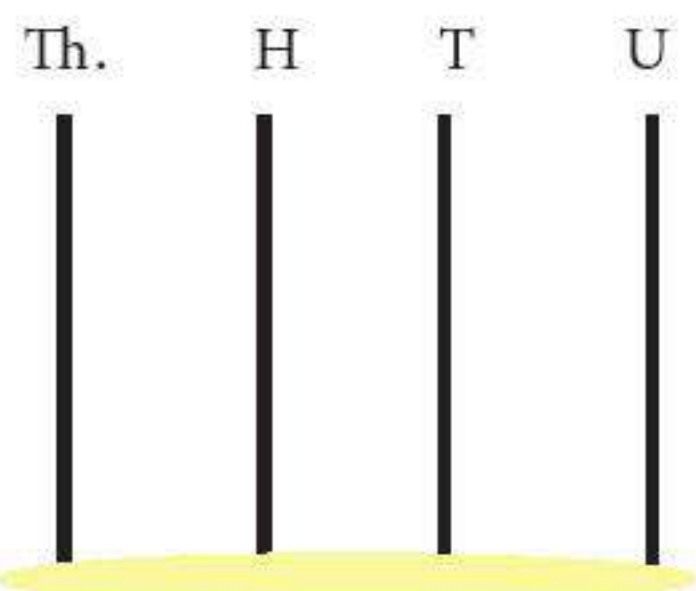

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h) 2115



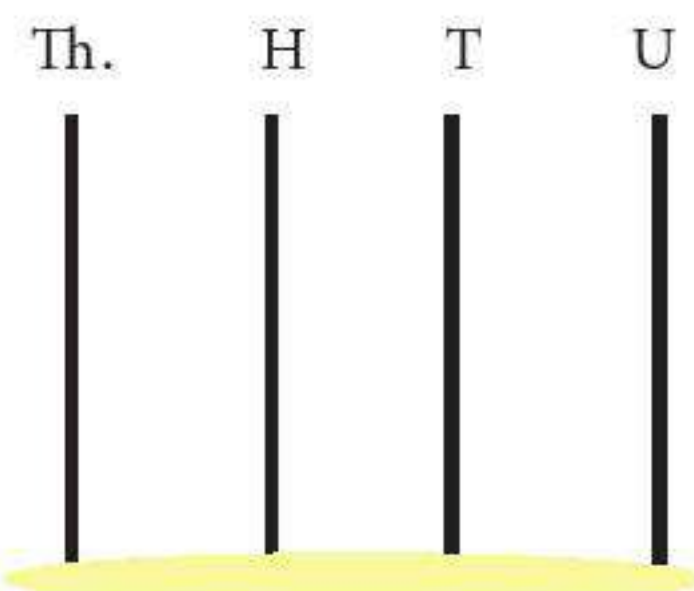

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i) 1445




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j) 9999

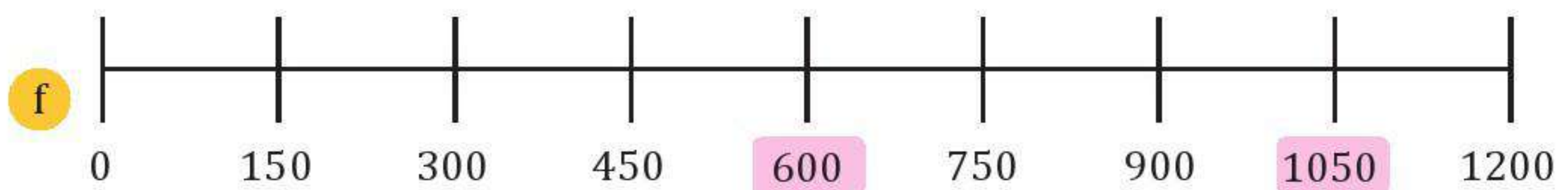
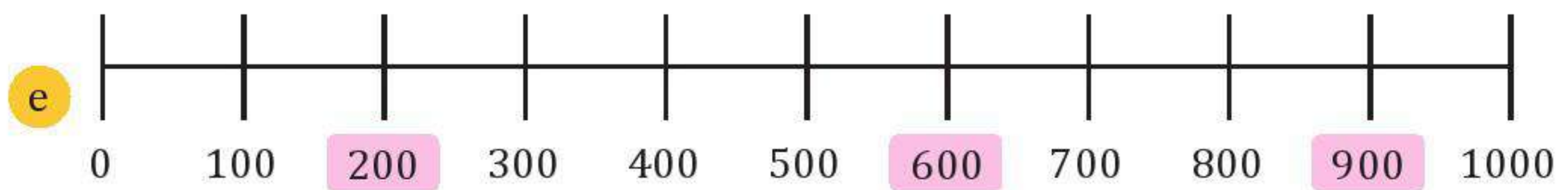
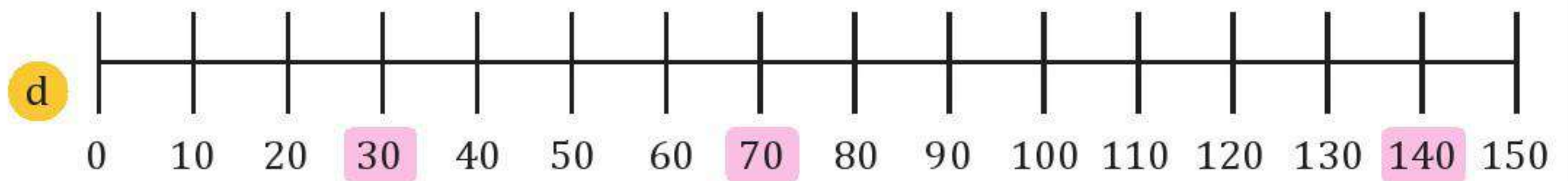
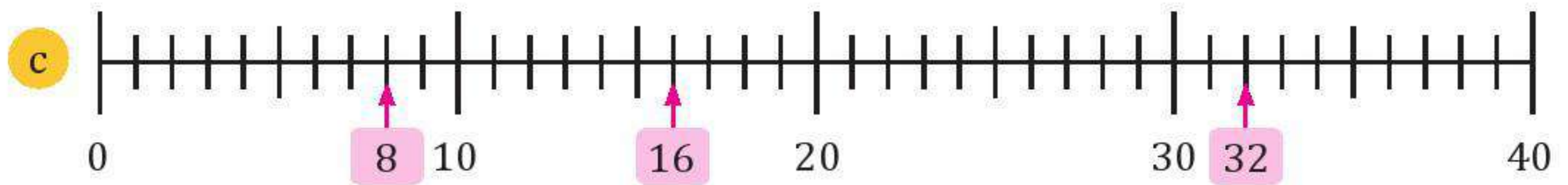
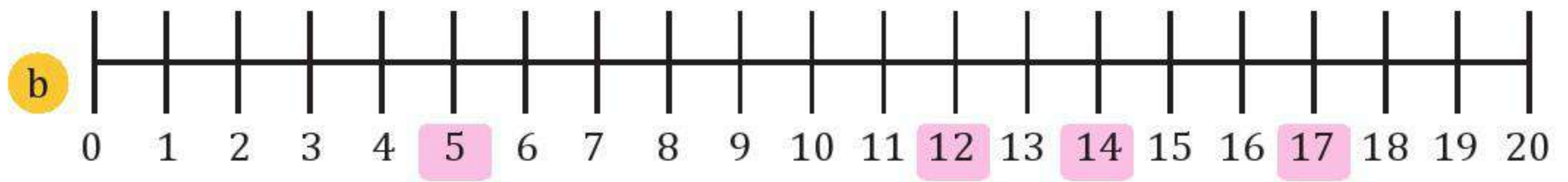
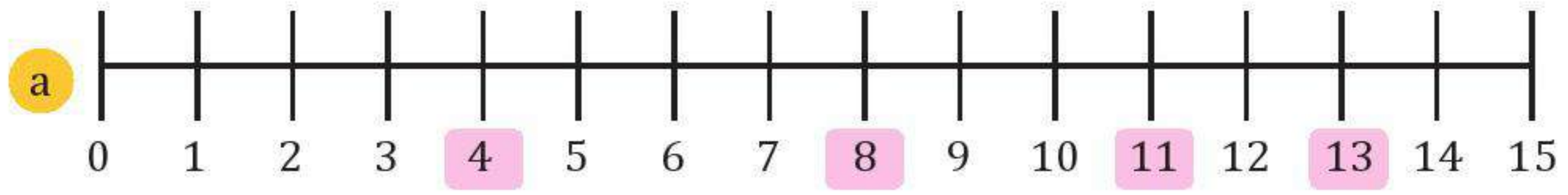



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**Note:** Student will draw beads same like a part till d part

### Exercise 3

1. Fill in the missing numbers on the number line.



## Exercise 4

1. Compare the numbers. Write  $<$  or  $>$  in the box.

a)	2400	$<$	3214	b)	1247	$>$	6632
c)	5204	$>$	1236	d)	6220	$>$	6110
e)	3451	$<$	7308	f)	2610	$<$	2669
g)	4720	$<$	4756	h)	3541	$<$	8500

2. What number is ...

a) 1 more than 1637      1638

b) 10 less than 2480      2470

c) 100 more than 3613      3713

d) 1000 less than 5143      4143

e) 1000 more than 4902      5902

3. What number comes before, after and between the given numbers?

	before		after		between		
a	4568	4569	2851	2852	2156	2157	2158
b	1246	1247	1022	1023	3263	3264	3265
c	2495	2496	3212	3213	5321	5322	5323
d	3251	3252	6428	6429	8580	8581	8582

**4. Arrange the numbers in ascending order.**

<b>a</b>	4425	2555	3520	6418	5511
	2555	3520	4425	5511	6418

<b>b</b>	1135	1562	2415	7532	3415
	1135	1562	2415	3415	7532

<b>c</b>	3504	2159	3254	2118	4159
	2118	2159	3254	3504	4159

<b>d</b>	5123	7516	4425	7520	3156
	3156	4425	5123	7516	7520

**5. Arrange the numbers in descending order.**

<b>a</b>	2490	3191	1308	4749	5520
	5520	4749	3191	2490	1308

<b>b</b>	6513	4415	1269	1745	3269
	6513	4415	3269	1745	1269

<b>c</b>	2550	1569	2653	2745	2146
	2745	2653	2550	2146	1569

<b>d</b>	2300	3502	3190	4666	4699
	4699	4666	3502	3190	2300

## Exercise 5

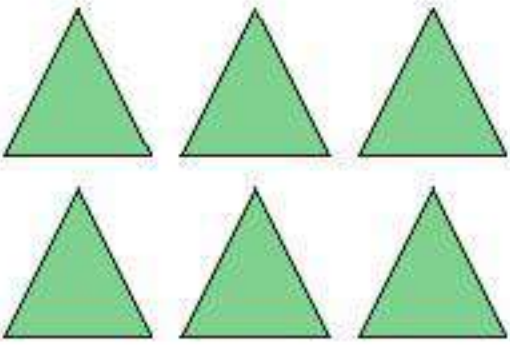
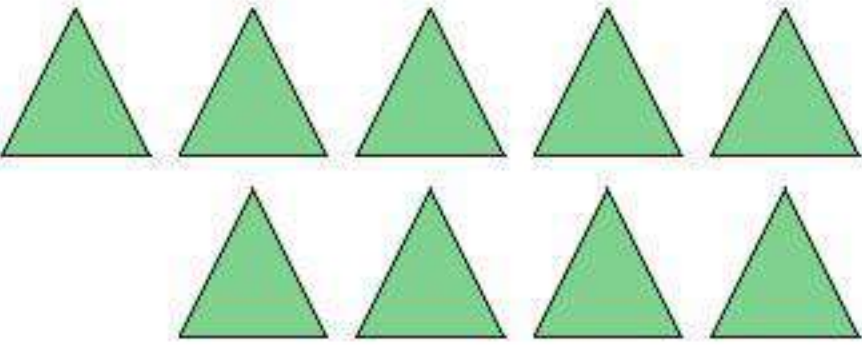
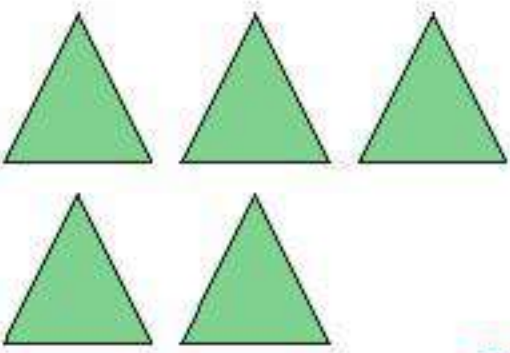
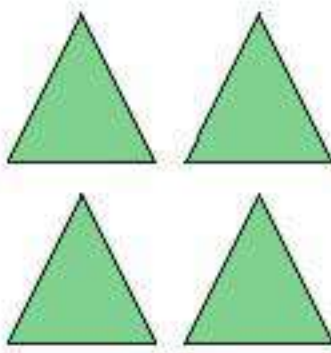
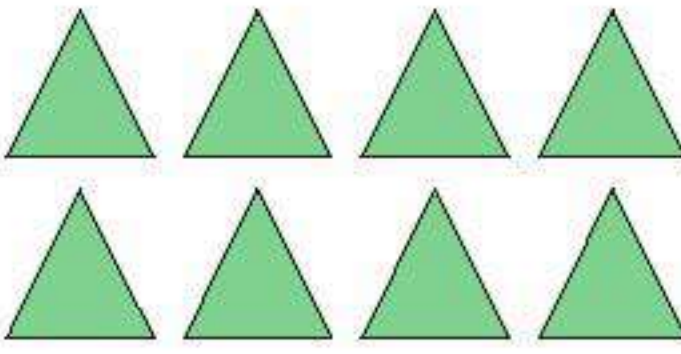
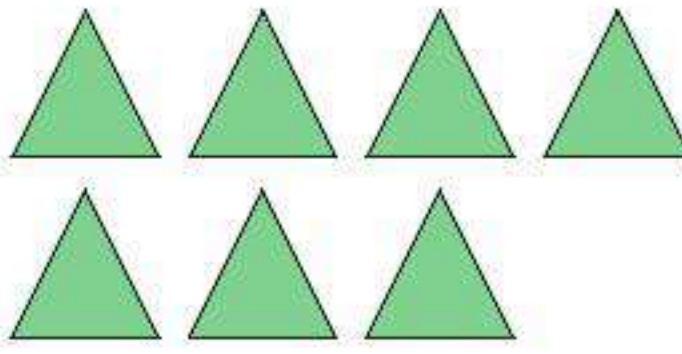
1. Encircle the odd numbers.

48	71	69	14	32	27
32	54	83	95	10	39

2. Encircle the even numbers.

37	51	14	46	38	71
45	20	53	62	35	16

3. Encircle whether the numbers are even or odd.

<p>a)</p>  <p>even                      odd</p>	<p>b)</p>  <p>even                      odd</p>
<p>c)</p>  <p>even                      odd</p>	<p>d)</p>  <p>even                      odd</p>
<p>e)</p>  <p>even                      odd</p>	<p>f)</p>  <p>even                      odd</p>

4. Is 27 an odd number?

Yes

5. Find out if 38 is an odd or even number?

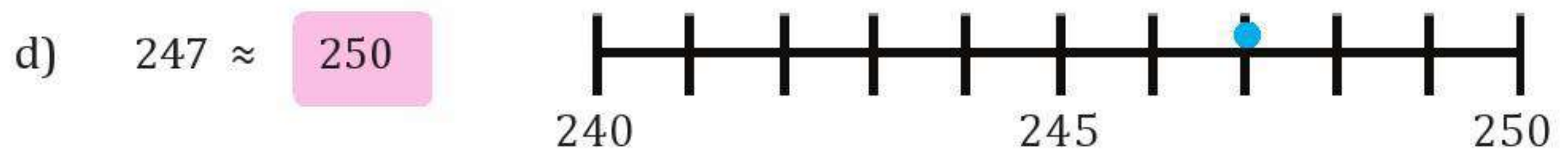
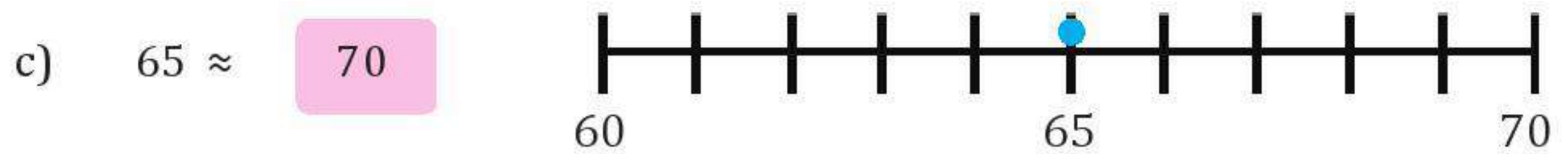
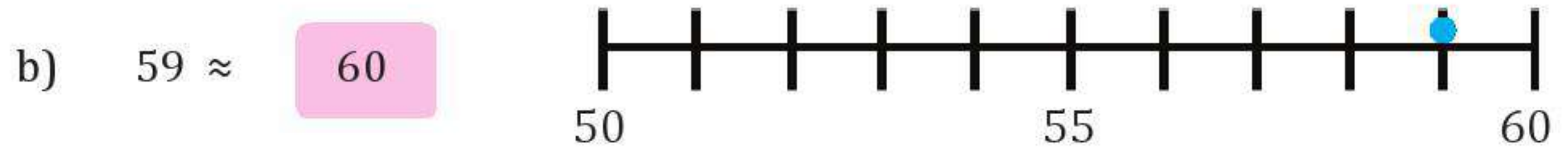
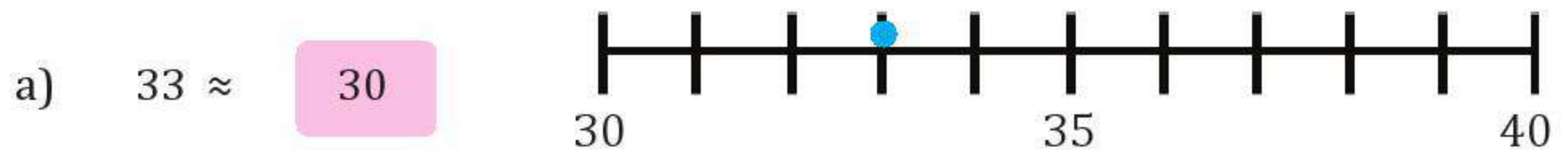
Even

6. List the even numbers between 30 and 40.

30, 32, 34, 36, 38, 40

## Exercise 6

1. Round off the numbers to the nearest 10. Use the number line.



2. Round off the numbers to the nearest 10.

a)  $23 \approx 20$

b)  $76 \approx 80$

c)  $51 \approx 50$

d)  $81 \approx 80$

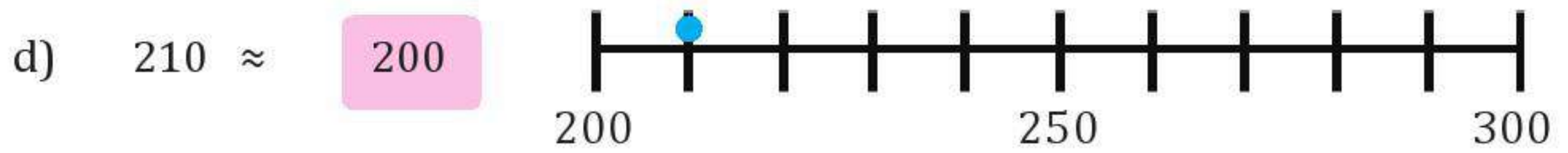
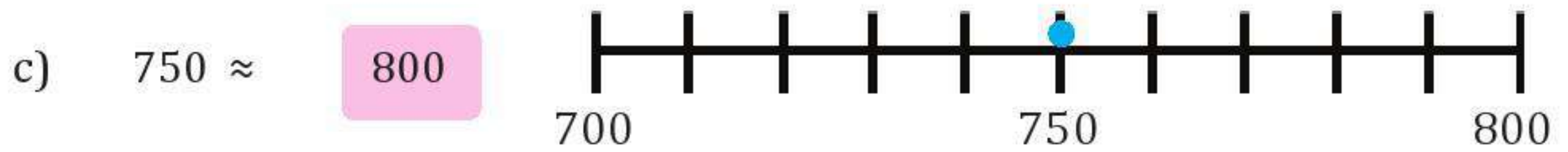
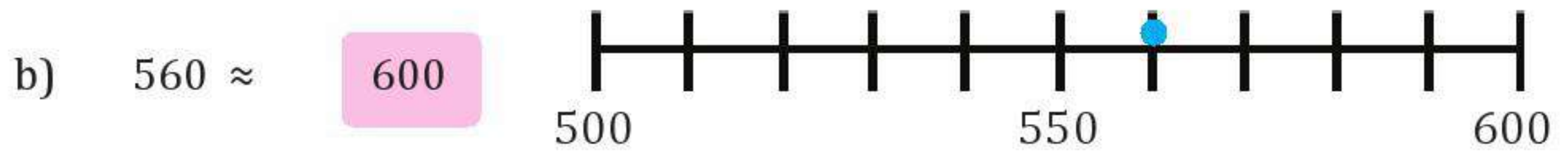
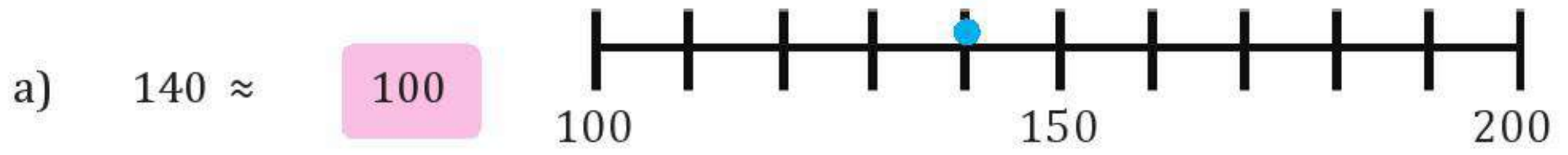
e)  $112 \approx 110$

f)  $245 \approx 250$

g)  $136 \approx 140$

h)  $317 \approx 320$

3. Round off the numbers to the nearest 100. Use the number line.



4. Round off the numbers to the nearest 100.

a)  $145 \approx$  100      b)  $656 \approx$  700

c)  $501 \approx$  500      d)  $482 \approx$  500

e)  $321 \approx$  300      f)  $673 \approx$  700

g)  $390 \approx$  400      h)  $547 \approx$  500




# Unit 2

## Addition within 10000


### Recap Exercise

1. Rida has 58 marbles and Nida has 63 marbles. How many marbles do the girls have altogether?

Rida



Nida



T	O
5	8
+	
6	3
1 2 1	

The girls have **121** marbles altogether.

2. Mr Khan sold 426 bananas on Monday. He sold 315 bananas on Tuesday. How many bananas did he sell on both of the days?



H	T	O
4	2	6
+		
3	1	5
7 4 1		

Mr Khan sold **741** bananas on the two days.

3. A factory makes 220 chocolate ice creams and 315 vanilla ice creams.  
How many ice creams does it make altogether?



H	T	O
2	2	0
+	3	15
5	3	5

The factory makes 515 ice cream altogether.

**Remember:**

10 ones make 1 ten.  
We carryover when there are more than 10 ones.

4. Add.

a	T	O
	① 4	4
+	1	8
	6	2

b	H	T	O
	① 5	① 2	6
+	1	8	6
	7	1	2

c	H	T	O
	6	2	5
+		7	3
	6	9	8

d	H	T	O
	1	4	0
+	7	0	9
	8	4	9

## Exercise 1

1. Add the given numbers.

$$\begin{array}{r}
 \text{a} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 1 \quad 1 \quad 2 \quad 2 \\
 + \quad \quad 2 \quad 0 \quad 3 \\
 \hline
 \quad \quad 1 \quad 3 \quad 2 \quad 5 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{b} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 1 \quad 6 \quad 3 \quad 2 \\
 + \quad \quad \quad 2 \quad 6 \\
 \hline
 \quad \quad 1 \quad 6 \quad 5 \quad 8 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{c} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 2 \quad 2 \quad 3 \quad 7 \\
 + \quad \quad 1 \quad 5 \quad 1 \\
 \hline
 \quad \quad 2 \quad 3 \quad 8 \quad 8 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{d} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 2 \quad 4 \quad 6 \quad 3 \\
 + \quad 3 \quad 2 \quad 1 \quad 0 \\
 \hline
 \quad \quad 5 \quad 6 \quad 7 \quad 3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{e} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 3 \quad 3 \quad 2 \quad 0 \\
 + \quad \quad 5 \quad 0 \quad 4 \\
 \hline
 \quad \quad 3 \quad 8 \quad 2 \quad 4 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{f} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 3 \quad 6 \quad 2 \quad 5 \\
 + \quad 1 \quad 0 \quad 7 \quad 3 \\
 \hline
 \quad \quad 4 \quad 6 \quad 9 \quad 8 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{g} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 4 \quad 3 \quad 1 \quad 1 \\
 + \quad 2 \quad 2 \quad 4 \quad 3 \\
 \hline
 \quad \quad 6 \quad 5 \quad 5 \quad 4 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{h} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 5 \quad 2 \quad 5 \quad 8 \\
 + \quad 1 \quad 5 \quad 2 \quad 1 \\
 \hline
 \quad \quad 6 \quad 7 \quad 7 \quad 9 \\
 \hline
 \end{array}$$

## Exercise 2

1. Add the following mentally.

a)  $26 + 29 = 55$

b)  $46 + 8 = 54$

c)  $31 + 38 = 69$

d)  $23 + 47 = 70$

e)  $14 + 57 = 71$

f)  $35 + 7 = 42$

g)  $61 + 15 = 76$

h)  $54 + 19 = 73$

## Exercise 3

1. Add the given numbers. The first one has been done for you.

a	Th	H	T	O
	2	2	① 2	8
+		1	4	3
	2	3	7	1

b	Th	H	T	O
	1	① 6	3	5
+			9	3
	1	7	2	8

c	Th	H	T	O
	2	① 3	8	7
+		2	5	2
	2	6	3	9

d	Th	H	T	O
	① 2	7	① 6	3
+		5	0	7
	3	2	7	0

e	Th	H	T	0	f	Th	H	T	0	g	Th	H	T	0
	3	①3	①2	8		①4	①6	8	5		①4	3	①5	9
+		5	8	4	+		6	7	3	+		8	3	1
<hr/>					<hr/>						<hr/>			
	3	9	1	2		5	3	5	8		5	1	9	0
<hr/>					<hr/>						<hr/>			

h	Th	H	T	0	i	Th	H	T	0	j	Th	H	T	0
	①5	①7	5	8		①6	①8	2	6		5	①4	2	5
+		5	5	1	+	1	3	8	0	+	1	0	9	3
<hr/>					<hr/>						<hr/>			
	6	3	0	9		8	2	0	6		6	5	1	8
<hr/>					<hr/>						<hr/>			

k	Th	H	T	0	l	Th	H	T	0	m	Th	H	T	0
	3	①3	①6	8		4	①8	①9	4		7	4	①7	2
+	3	4	5	6	+	2	5	5	4	+	1	3	3	9
<hr/>					<hr/>						<hr/>			
	6	8	2	4		8	4	5	8		8	7	1	1
<hr/>					<hr/>						<hr/>			

n	Th	H	T	0	o	Th	H	T	0	p	Th	H	T	0
	①6	①6	①8	5		8	①5	①9	7		9	3	①0	9
+	1	6	1	7	+		1	7	8	+		4	0	8
<hr/>					<hr/>						<hr/>			
	8	3	0	2		8	7	7	5		9	7	1	7
<hr/>					<hr/>						<hr/>			

Exercise 4

1. Aamir sells 1578 fruits on Friday and 2048 over the weekend. How many fruits does he sell altogether?



$$1578 + 2048 = 3626$$

Aamir sells 3626 fruits altogether.

Th	H	T	O
1	5	7	8
+	2	0	4
			8
3	6	2	6

2. There were 1480 adults and 2570 children at a park on Sunday. How many people were there altogether?

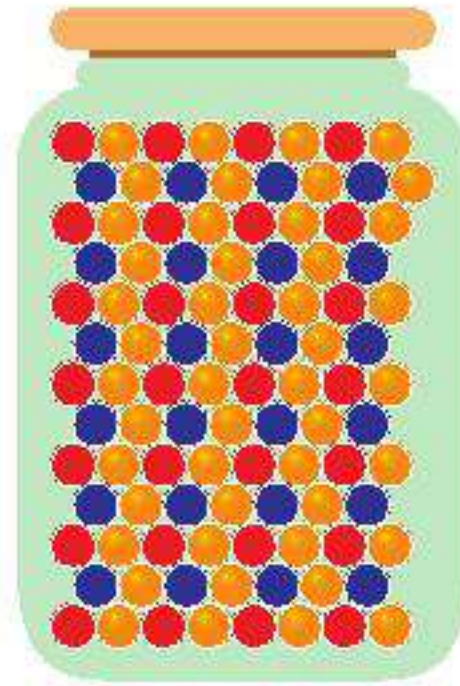


$$1480 + 2570 = 4050$$

There were 4050 people altogether.

Th	H	T	O
1	4	8	0
+	2	5	7
			0
4	0	5	0

3. Saira has 1315 pearls and her sister has 2286. How many pearls do the girls have altogether?

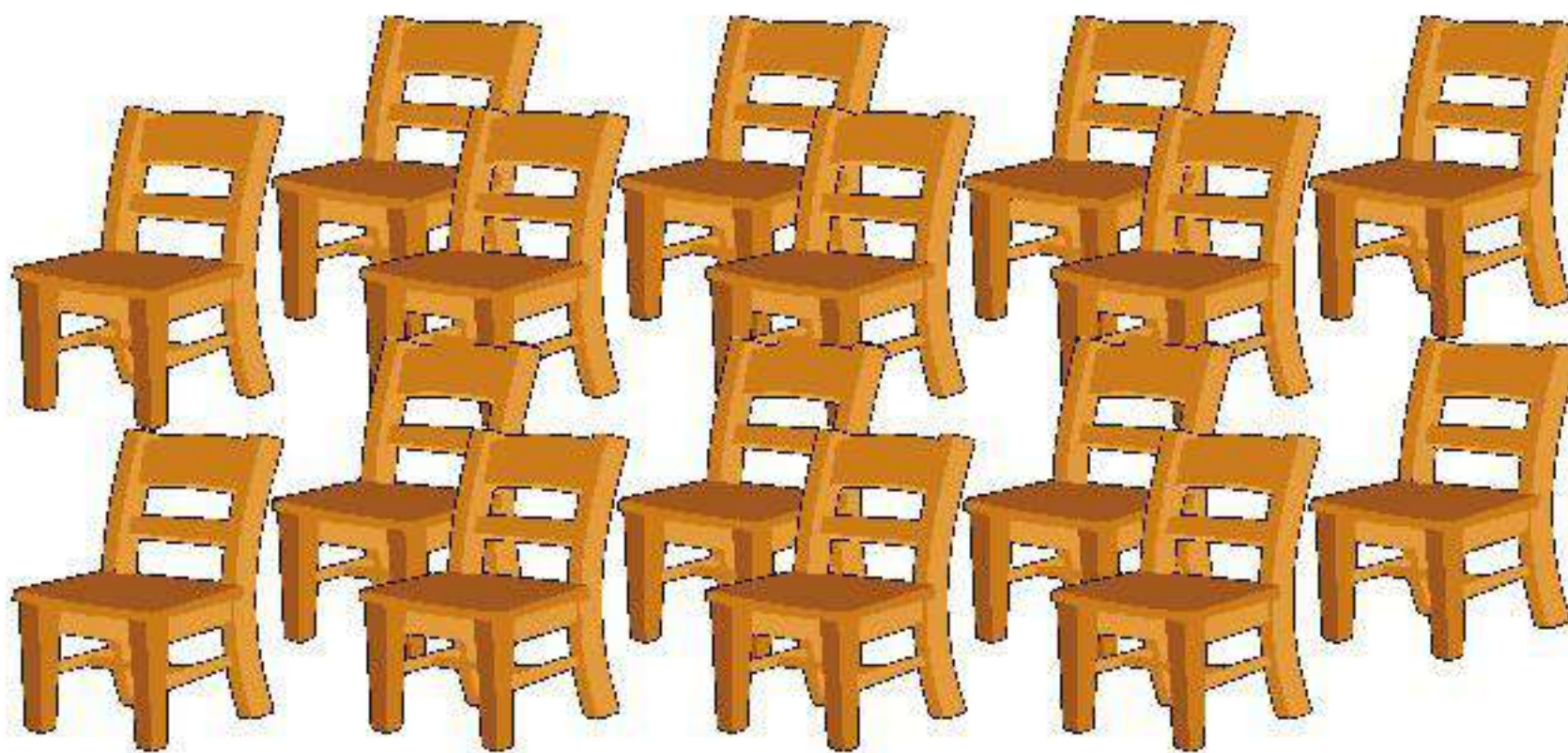


$$1315 + 2286 = 3601$$

The girls have 3601 pearls altogether.

Th	H	T	O
1	3	1	5
+	2	2	8
3	6	0	1

4. There were 2246 chairs in a hall. 620 more chairs were added to the hall. How many chairs were there altogether?



$$2246 + 620 = 2866$$

There were 2866 chairs altogether.

Th	H	T	O
2	2	4	6
+	6	2	0
2	8	6	6

# Unit 3

## Subtract numbers up to 4 - digits

### Recap Exercise

1. Sami has 42 books. He gives 26 books to his friend. How many books does Sami have?



$$\begin{array}{r}
 \text{T} \quad 0 \\
 4 \quad 2 \\
 - 2 \quad 6 \\
 \hline
 1 \quad 6 \\
 \hline
 \end{array}$$

Sami has **16** books.

2. A baker bakes 250 cupcakes and he sells 143. How many cupcakes are left?



$$\begin{array}{r}
 \text{H} \quad \text{T} \quad 0 \\
 2 \quad 5 \quad 0 \\
 - 1 \quad 4 \quad 3 \\
 \hline
 1 \quad 0 \quad 7 \\
 \hline
 \end{array}$$

There are **107** cupcakes.

3. Subtract.

a

$$\begin{array}{r}
 \text{H} \quad \text{T} \quad 0 \\
 9 \quad 7 \quad 0 \\
 - 6 \quad 4 \quad 0 \\
 \hline
 3 \quad 3 \quad 0 \\
 \hline
 \end{array}$$

b

$$\begin{array}{r}
 \text{H} \quad \text{T} \quad 0 \\
 6 \quad 2 \quad 8 \\
 - 1 \quad 6 \quad 3 \\
 \hline
 4 \quad 6 \quad 5 \\
 \hline
 \end{array}$$



## Exercise 1

1. Subtract the given numbers, first has been solved for you.

$$\begin{array}{r}
 \text{a} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 2 \quad 5 \quad 2 \quad 4 \\
 - \quad \quad 2 \quad 0 \quad 3 \\
 \hline
 2 \quad 3 \quad 2 \quad 1
 \end{array}$$

$$\begin{array}{r}
 \text{b} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 1 \quad 6 \quad 3 \quad 8 \\
 - \quad \quad 5 \quad 2 \quad 3 \\
 \hline
 1 \quad 1 \quad 1 \quad 5
 \end{array}$$

$$\begin{array}{r}
 \text{c} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 3 \quad 7 \quad 2 \quad 9 \\
 - \quad \quad 5 \quad 0 \quad 4 \\
 \hline
 3 \quad 2 \quad 2 \quad 5
 \end{array}$$

$$\begin{array}{r}
 \text{d} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 3 \quad 2 \quad 7 \quad 5 \\
 - \quad \quad \quad 7 \quad 3 \\
 \hline
 3 \quad 2 \quad 0 \quad 2
 \end{array}$$

$$\begin{array}{r}
 \text{e} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 6 \quad 3 \quad 1 \quad 6 \\
 - \quad 2 \quad 1 \quad 0 \quad 5 \\
 \hline
 4 \quad 2 \quad 1 \quad 1
 \end{array}$$

$$\begin{array}{r}
 \text{f} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 4 \quad 4 \quad 8 \quad 5 \\
 - \quad 1 \quad 1 \quad 2 \quad 0 \\
 \hline
 3 \quad 3 \quad 6 \quad 5
 \end{array}$$

$$\begin{array}{r}
 \text{g} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 8 \quad 6 \quad 4 \quad 7 \\
 - \quad 5 \quad 1 \quad 0 \quad 3 \\
 \hline
 3 \quad 5 \quad 4 \quad 4
 \end{array}$$

$$\begin{array}{r}
 \text{h} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 6 \quad 7 \quad 5 \quad 6 \\
 - \quad 6 \quad 1 \quad 2 \quad 3 \\
 \hline
 \quad \quad 6 \quad 3 \quad 3
 \end{array}$$

## Exercise 2

1. Subtract the following mentally.

a)  $45 - 27 = 18$

b)  $30 - 19 = 11$

c)  $57 - 14 = 43$

d)  $35 - 6 = 29$

e)  $74 - 46 = 28$

f)  $88 - 52 = 36$

g)  $96 - 61 = 35$

h)  $67 - 49 = 18$

a)  $45 - 27$

$$40 - 20 = 20 - 10 = 10$$

$5 - 7$  not possible we borrow 10 from 20

$$15 - 7 = 8$$

Now add 10 and 8 = 18

a)  $30 - 19$

$$30 - 10 = 20 - 10 = 10$$

$0 - 9$  not possible we borrow 10 from 20

$$10 - 9 = 1$$

Now add  $10 + 1 = 11$

## Exercise 3

1. Subtract the given numbers. The first one has been solved for you.

a	Th	H	T	O
	3	<del>5</del> <sup>4</sup>	2	8
-		1	4	3
	3	3	8	5

b	Th	H	T	O
	1	6	3	5
-			9	3
	1	5	4	2

c	Th	H	T	O
	2	8	3	7
-		2	6	2
	2	5	7	5

d	Th	H	T	O
	3	7	6	3
-		5	3	7
	3	2	2	6

e	Th	H	T	0	f	Th	H	T	0	g	Th	H	T	0
	5	3	2	8		4	0	8	0		4	3	5	1
-		5	5	2	-		6	1	3	-		8	3	6
<hr/>					<hr/>					<hr/>				
	4	7	7	6		3	4	6	7		3	5	1	5
<hr/>					<hr/>					<hr/>				

h	Th	H	T	0	i	Th	H	T	0	j	Th	H	T	0
	5	0	5	8		6	8	2	6		5	4	2	1
-		1	0	5	-	2	3	8	4	-	1	0	7	3
<hr/>					<hr/>					<hr/>				
	4	9	5	3		4	4	4	2		4	3	4	8
<hr/>					<hr/>					<hr/>				

k	Th	H	T	0	l	Th	H	T	0	m	Th	H	T	0
	8	3	6	3		4	8	9	2		7	4	4	2
-	3	4	5	6	-	2	5	5	4	-	3	3	3	9
<hr/>					<hr/>					<hr/>				
	4	1	0	3		2	3	3	8		4	1	0	3
<hr/>					<hr/>					<hr/>				

n	Th	H	T	0	o	Th	H	T	0	p	Th	H	T	0
	6	6	8	5		9	5	9	7		9	3	0	9
-	4	6	1	7	-	5	4	2	8	-	7	4	0	6
<hr/>					<hr/>					<hr/>				
	2	0	6	8		4	1	6	9		1	9	0	3
<hr/>					<hr/>					<hr/>				

## Exercise 4

1. Hamid has 2250 packets of juice, he sells 1120. How many packets of juice does he have?



$$2250 - 1120 = 1130$$

Hamid has 1130 packets of juice.

Th	H	T	O
2	2	5	0
-	1	1	2
1	1	3	0

2. There were 2293 people at a park on Friday and 3145 people on Saturday. How many more people visited the park on Saturday than Friday?



$$\square - \square = \square$$

$\square$  more people visited the park on Saturday.

Th	H	T	O
3	1	4	5
-	2	2	9
0	8	5	2

3. A factory makes 5000 shirts. It supplies 1400 to one shop and 1125 shirts to another shop. How many shirts are left in the factory?



$$1400 + 1125 = 2525$$

2525 shirts were sent to shops.

	Th	H	T	0
	1	4	0	0
+	1	1	2	5
	2	5	2	5

$$5000 - 2525 = 2475$$

There are 2475 shirts left in the factory.

	Th	H	T	0
	5	0	0	0
+	2	5	2	5
	2	4	7	5

# Unit 4

## Multiplication

### Recap Exercise

#### Repeated Addition

1. Look at the picture below. How many gloves are there?



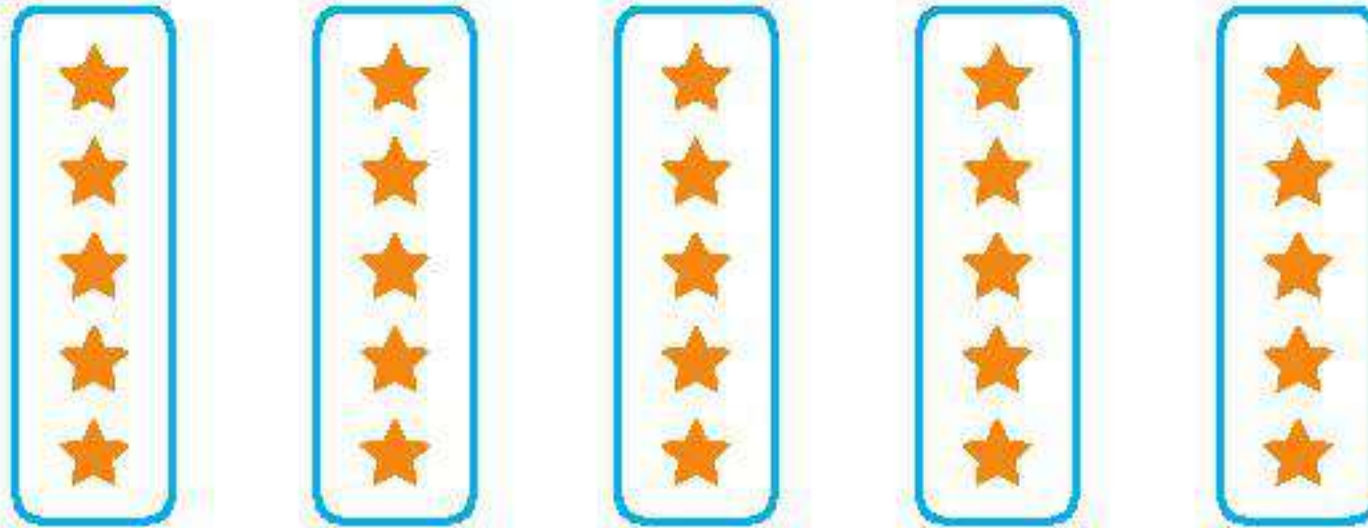
There are 5 pairs of gloves  
Each pair has 2 gloves.

$$5 \text{ times } 2 = 10$$

$$5 \times 2 = 10$$

There are 10 gloves altogether.

2. How many stars are there?



There are 5 groups.

Each group has 5 stars.

$$5 \text{ times } 5 = 25$$

$$5 \times 5 = 25$$

There are 25 stars altogether.

3. How many cars are there?



There are 7 boxes.

Each box has 3 cars.

$$7 \text{ times } 3 = 21$$

$$7 \times 3 = 21$$

There are 21 cars altogether.

4. How many birds are there?



There are 6 cages.

Each cage has 4 birds.

$$6 \text{ times } 4 = 24$$

$$6 \times 4 = 24$$

There are 24 birds altogether.

5. How many pearls are there?



There are **8** strings.

Each string has 10 pearls.

$$8 \text{ times } 10 = 80$$

$$8 \times 10 = 80$$

There are **80** pearls altogether.

6. Multiply these mentally.

a)  $3 \times 2 = 6$

b)  $4 \times 3 = 12$

c)  $7 \times 3 = 21$

d)  $6 \times 5 = 30$

e)  $5 \times 4 = 20$

f)  $9 \times 4 = 36$

g)  $3 \times 5 = 15$

h)  $8 \times 3 = 24$

i)  $6 \times 2 = 12$

j)  $7 \times 4 = 28$

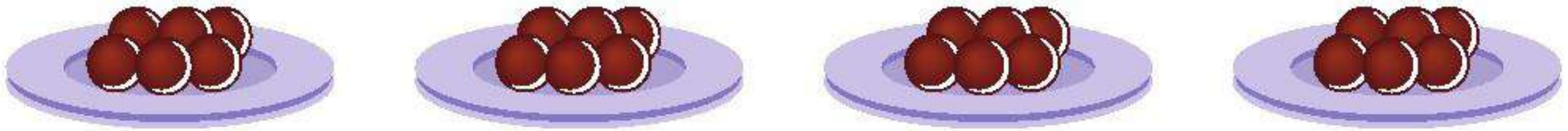
k)  $6 \times 3 = 18$

l)  $9 \times 5 = 45$



## Exercise 1

1. How many sweets are there altogether?



There are 4 plates.

Each plate has 6 sweets.

$$4 \text{ times } 6 = 24$$

$$4 \times 6 = 24$$

There are 24 sweets altogether.

2. How many oranges are there?



There are 6 bags

Each bag has 6 oranges.

$$6 \text{ times } 6 = 36$$

$$6 \times 6 = 36$$

There are 36 oranges altogether.

3. How many stars are there?



There are **9** groups.

Each group has 6 stars.

$$9 \text{ times } 6 = 54$$

$$9 \times 6 = 54$$

There are **54** stars altogether.

4. Multiply these mentally. Recall the table of 6.

a  $3 \times 6 = 18$

b  $7 \times 6 = 42$

c  $8 \times 6 = 48$

d  $6 \times 6 = 36$

e  $4 \times 6 = 24$

## Exercise 2

1. How many balls are there altogether?



There are 5 boxes.

There are 7 balls in each box.

$$5 \text{ times } 7 = 35$$

$$5 \times 7 = 35$$

There are 35 balls altogether.

2. How many books are there?



There are 2 groups of books.

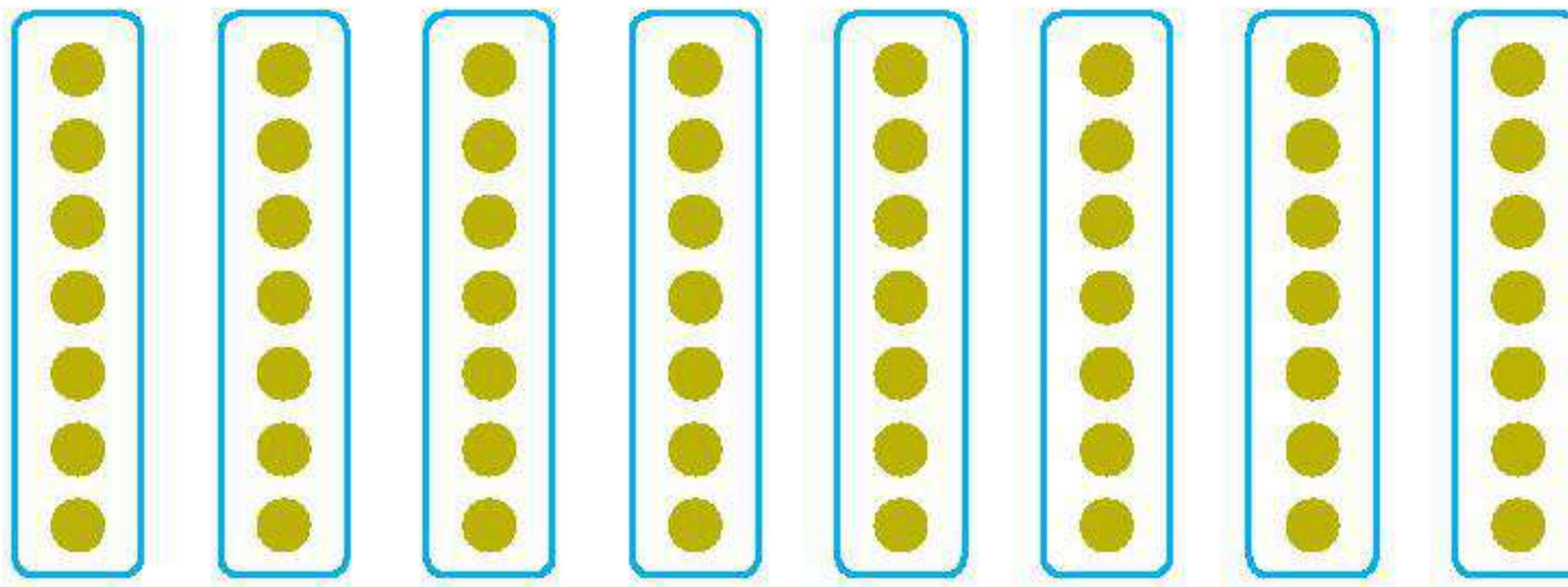
Each groups has 7 books.

$$2 \text{ times } 7 = 14$$

$$2 \times 7 = 14$$

There are 14 books altogether.

3. How many dots are there?



There are **8** groups.

Each group has 7 dots.

$$8 \text{ times } 7 = 56$$

$$8 \times 7 = 56$$

There are **56** dots altogether.

4. Multiply these mentally. Recall the table of 7.

a  $3 \times 7 = 21$

b  $6 \times 7 = 42$

c  $5 \times 7 = 35$

d  $8 \times 7 = 56$

e  $9 \times 7 = 63$

## Exercise 3

1. How many marbles are there altogether?



There are 3 bags.

There are 8 marbles in each bag.

$$3 \text{ times } 8 = 24$$

$$3 \times 8 = 24$$

There are 24 marbles altogether.

2. How many beads are there?



There are 8 strings.

Each string has 8 beads.

$$8 \text{ times } 8 = 64$$

$$8 \times 8 = 64$$

There are 64 beads altogether.

3. How many flowers are there altogether?



There are 6 bunches.

There are 8 flowers in each bunch.

$$6 \text{ times } 8 = 48$$

$$6 \times 8 = 48$$

There are 48 flowers altogether.

4. Multiply these mentally. Recall the table of 8.

a  $3 \times 8 = 24$

b  $6 \times 8 = 48$

c  $5 \times 8 = 40$

d  $2 \times 8 = 16$

e  $9 \times 8 = 72$

## Exercise 4

1. How many cars are there altogether?



There are 4 boxes.

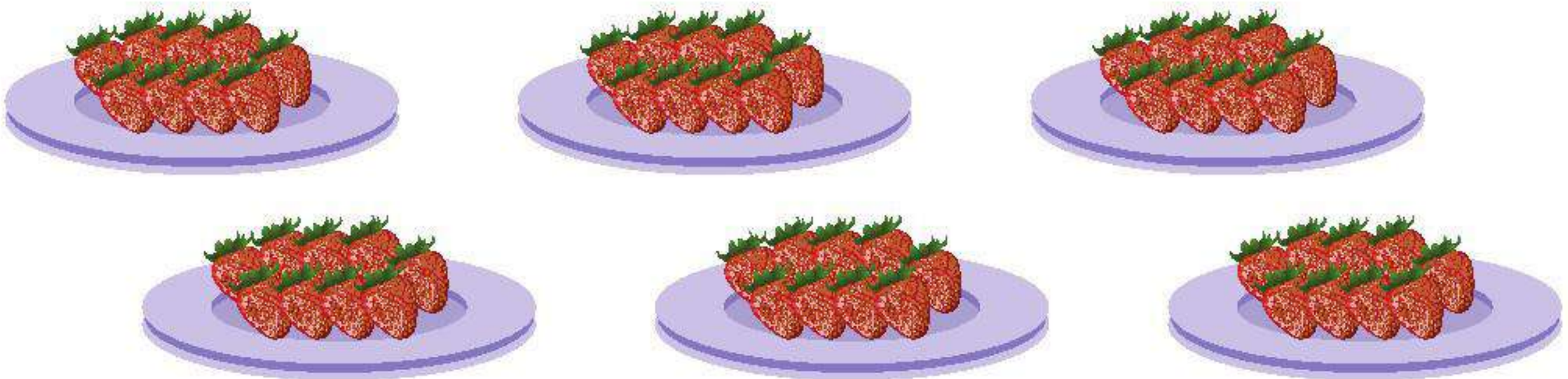
There are 9 cars in each box.

$$4 \text{ times } 9 = 36$$

$$4 \times 9 = 36$$

There are 36 cars altogether.

2. How many strawberries are there?



There are 6 plates.

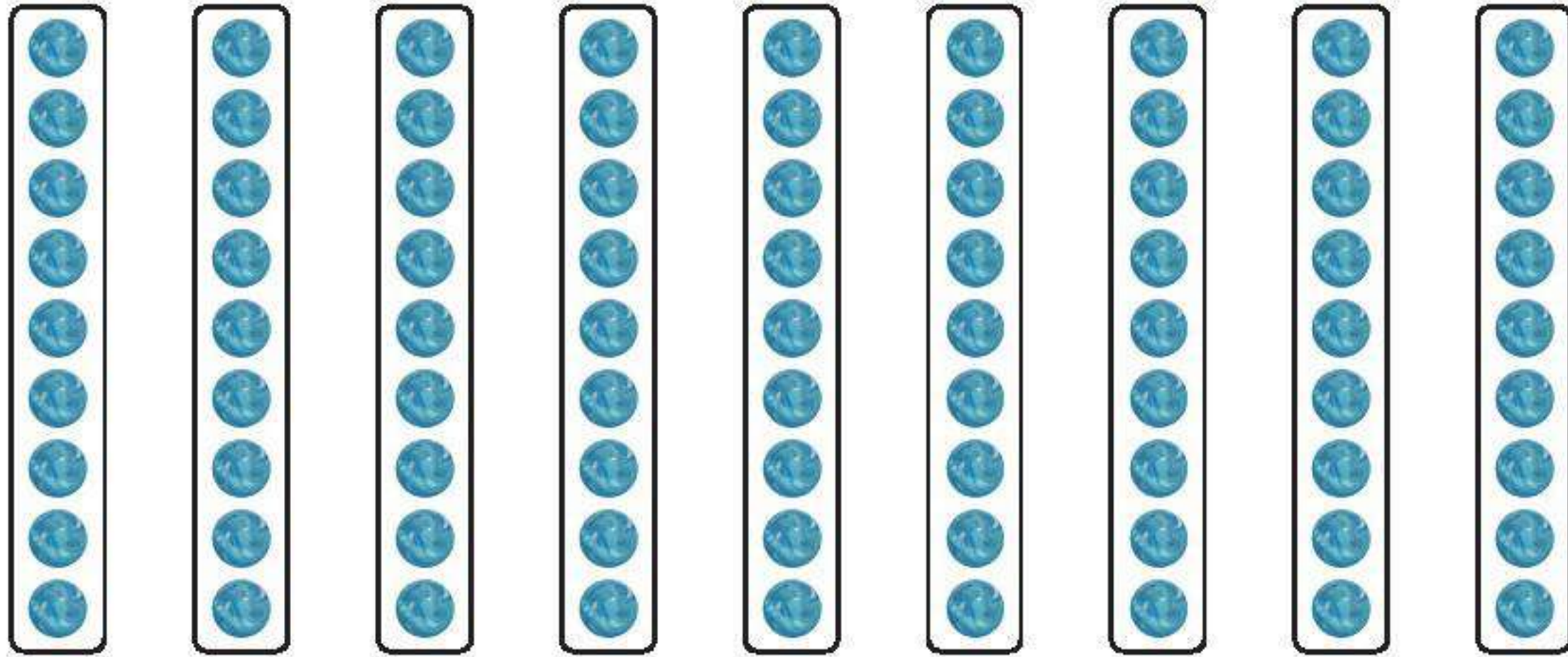
Each plate has 9 strawberries.

$$6 \text{ times } 9 = 54$$

$$6 \times 9 = 54$$

There are 54 strawberries altogether.

3. How many marbles are there altogether?



There are 9 groups.

Each group has 9 marbles.

$$9 \text{ times } 9 = 81$$

$$9 \times 9 = 81$$

There are 81 marbles altogether.

4. Multiply these mentally. Recall the table of 9.

a  $5 \times 9 = 45$

b  $4 \times 9 = 36$

c  $2 \times 9 = 18$

d  $6 \times 9 = 54$

e  $8 \times 9 = 72$



## Exercise 5

1. Multiply the following. The first one has been solved for you.

$$\begin{array}{r} \text{a} \quad \text{T} \quad 0 \\ \textcircled{1} \quad 1 \quad 6 \\ \times \quad \quad 3 \\ \hline \quad 4 \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad \text{T} \quad 0 \\ \textcircled{1} \quad 2 \quad 3 \\ \times \quad \quad 4 \\ \hline \quad 9 \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad \text{T} \quad 0 \\ \quad \quad 3 \quad 0 \\ \times \quad \quad 2 \\ \hline \quad 6 \quad 0 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \textcircled{3} \quad 2 \quad 7 \\ \times \quad \quad \quad 5 \\ \hline \quad 1 \quad 3 \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \textcircled{1} \quad 3 \quad 2 \\ \times \quad \quad \quad 6 \\ \hline \quad 1 \quad 9 \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \quad 4 \quad 1 \\ \times \quad \quad \quad 3 \\ \hline \quad 1 \quad 2 \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \textcircled{3} \quad 1 \quad 4 \\ \times \quad \quad \quad 8 \\ \hline \quad 1 \quad 1 \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \quad 1 \quad 1 \\ \times \quad \quad \quad 9 \\ \hline \quad \quad 9 \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \quad \textcircled{2} \quad 3 \quad 9 \\ \times \quad \quad \quad 3 \\ \hline \quad 1 \quad 1 \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \textcircled{3} \quad 4 \quad 8 \\ \times \quad \quad \quad 6 \\ \hline \quad 2 \quad 8 \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \quad 6 \quad 1 \\ \times \quad \quad \quad 7 \\ \hline \quad 4 \quad 2 \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l} \quad \text{H} \quad \text{T} \quad 0 \\ \quad \quad \quad \textcircled{1} \quad 5 \quad 5 \\ \times \quad \quad \quad 2 \\ \hline \quad 1 \quad 1 \quad 0 \\ \hline \end{array}$$

## Exercise 6

1. There are 4 baskets. Each basket has 6 kittens. How many kittens are there altogether?

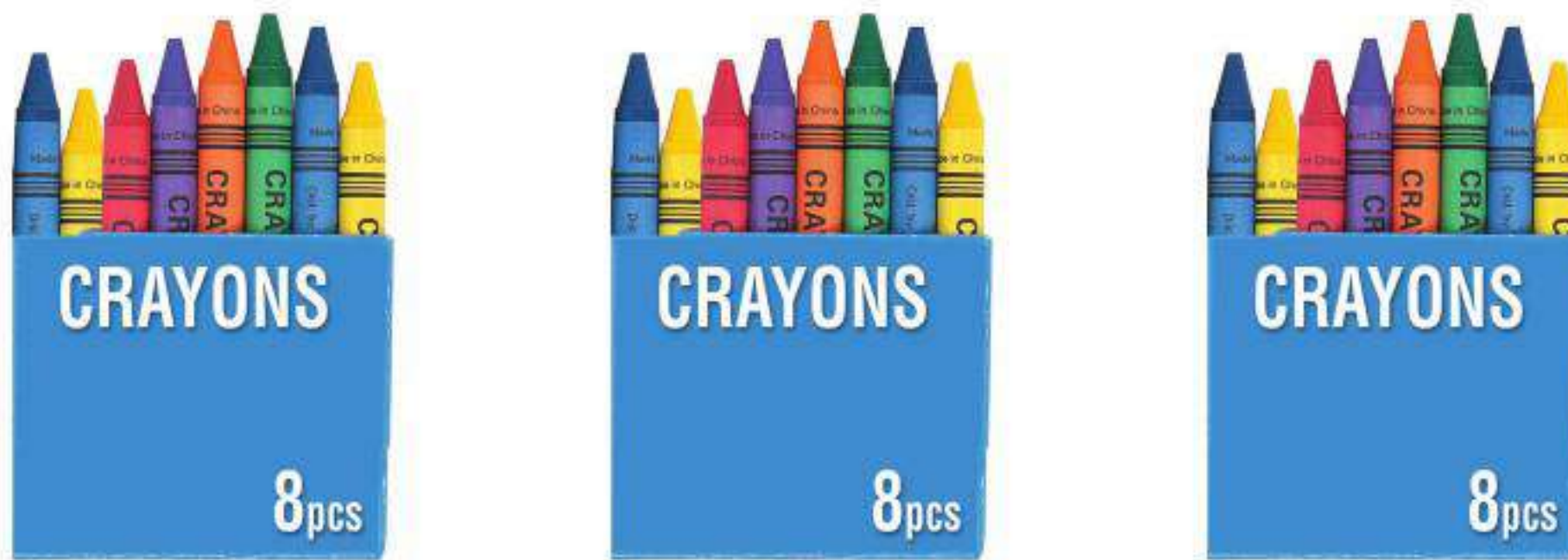


$$4 \text{ times } 6 = 24$$

$$4 \times 6 = 24$$

There are 24 kittens altogether.

2. Maha has 3 boxes. Each box has 8 crayons. How many crayons are there altogether?

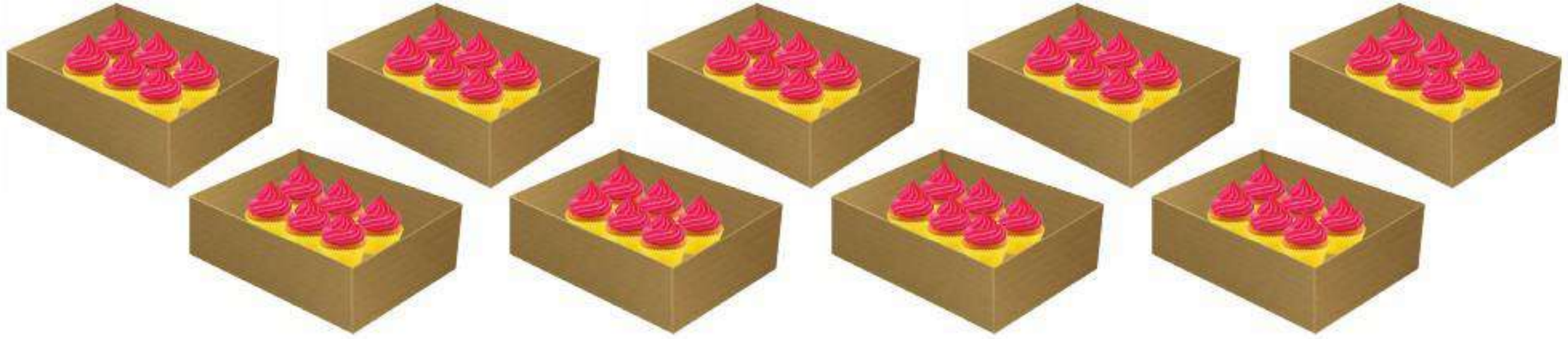


$$3 \text{ times } 8 = 24$$

$$3 \times 8 = 24$$

There are 24 crayons altogether.

3. Ali sells 9 boxes of cupcakes. Each box has 6 cupcakes. How many cupcakes does he sell altogether?

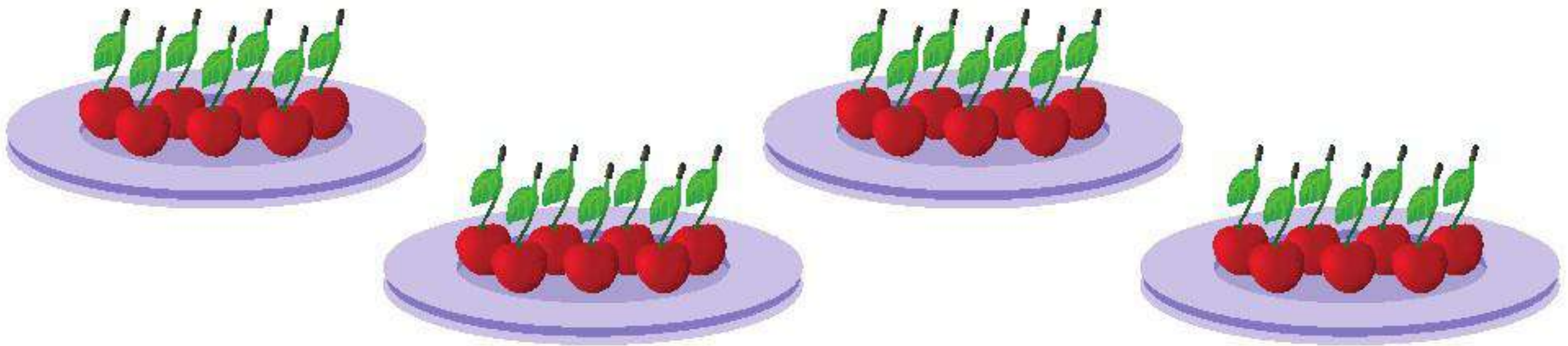


$$9 \text{ times } 6 = 54$$

$$9 \times 6 = 54$$

Ali sells 54 cupcakes altogether.

4. There are 4 plates. Each plate has 7 cherries. How many cherries are there altogether?



$$4 \text{ times } 7 = 28$$

$$4 \times 7 = 28$$

There are 28 cherries altogether.

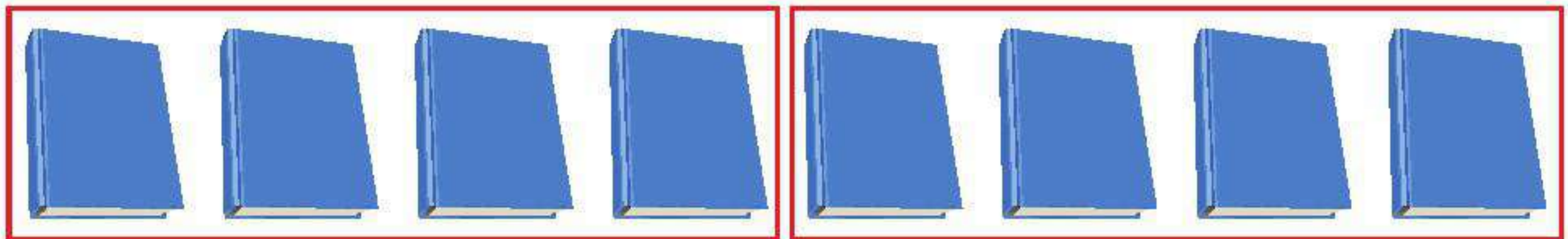
# Unit 5

## Division

### Recap Exercise

#### Recap

1. There are 8 books. Divide them into 2 groups equally. How many books are there in each group?



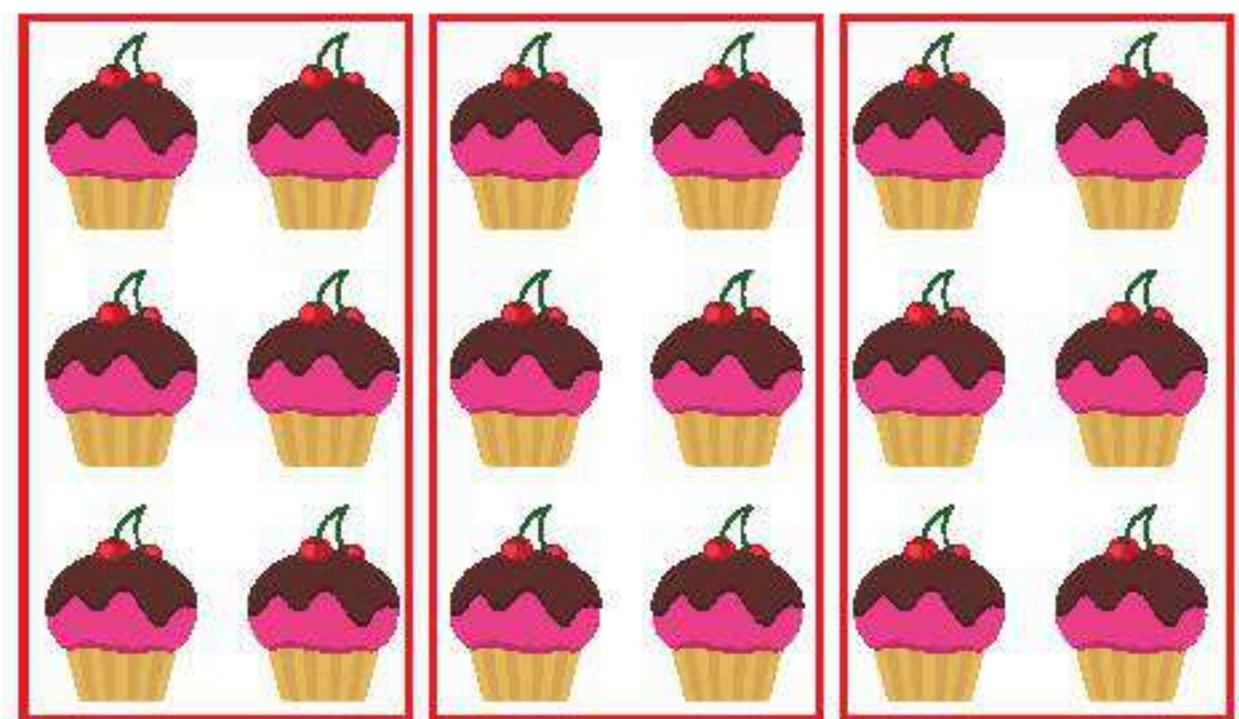
$$8 \div 2 = 4$$

There are 4 books in each group.

2. Nida has 18 cupcakes. She puts the cupcakes in equal groups of 3. How many groups does she make?

$$18 \div 3 = 6$$

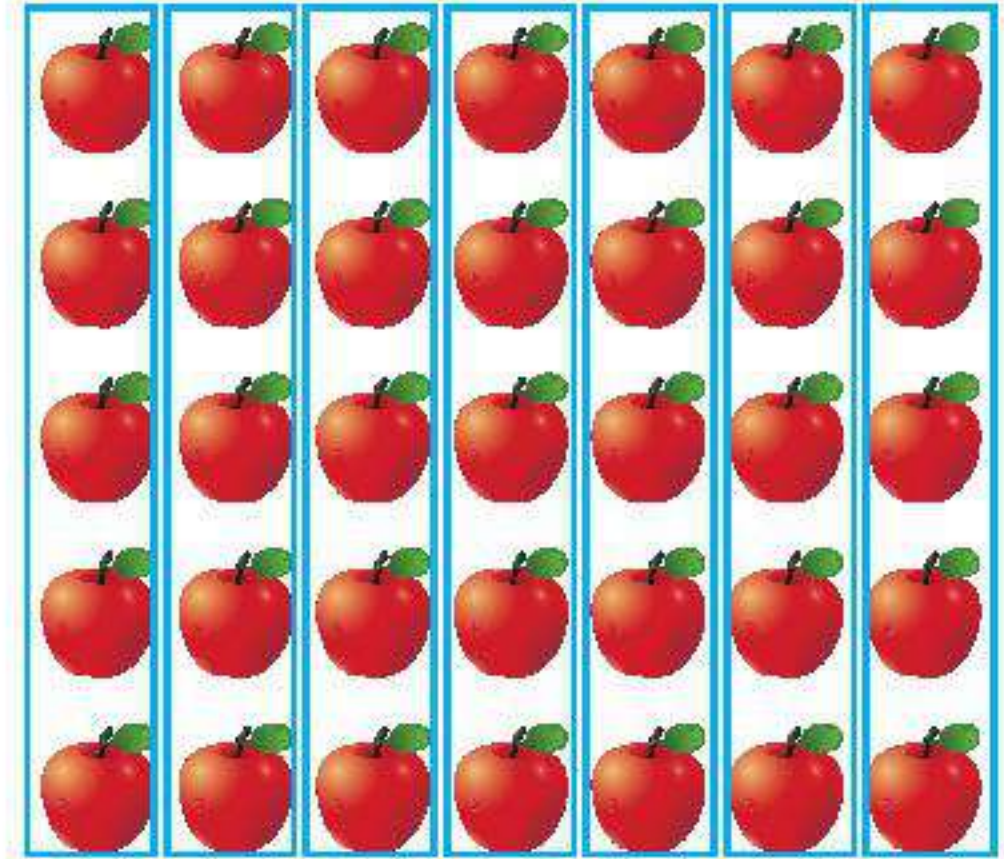
She makes 3 groups of 6 cupcakes.



3. There are 35 apples. Divide them into 5 groups equally. How many apples are there in each group?

$$35 \div 5 = 7$$

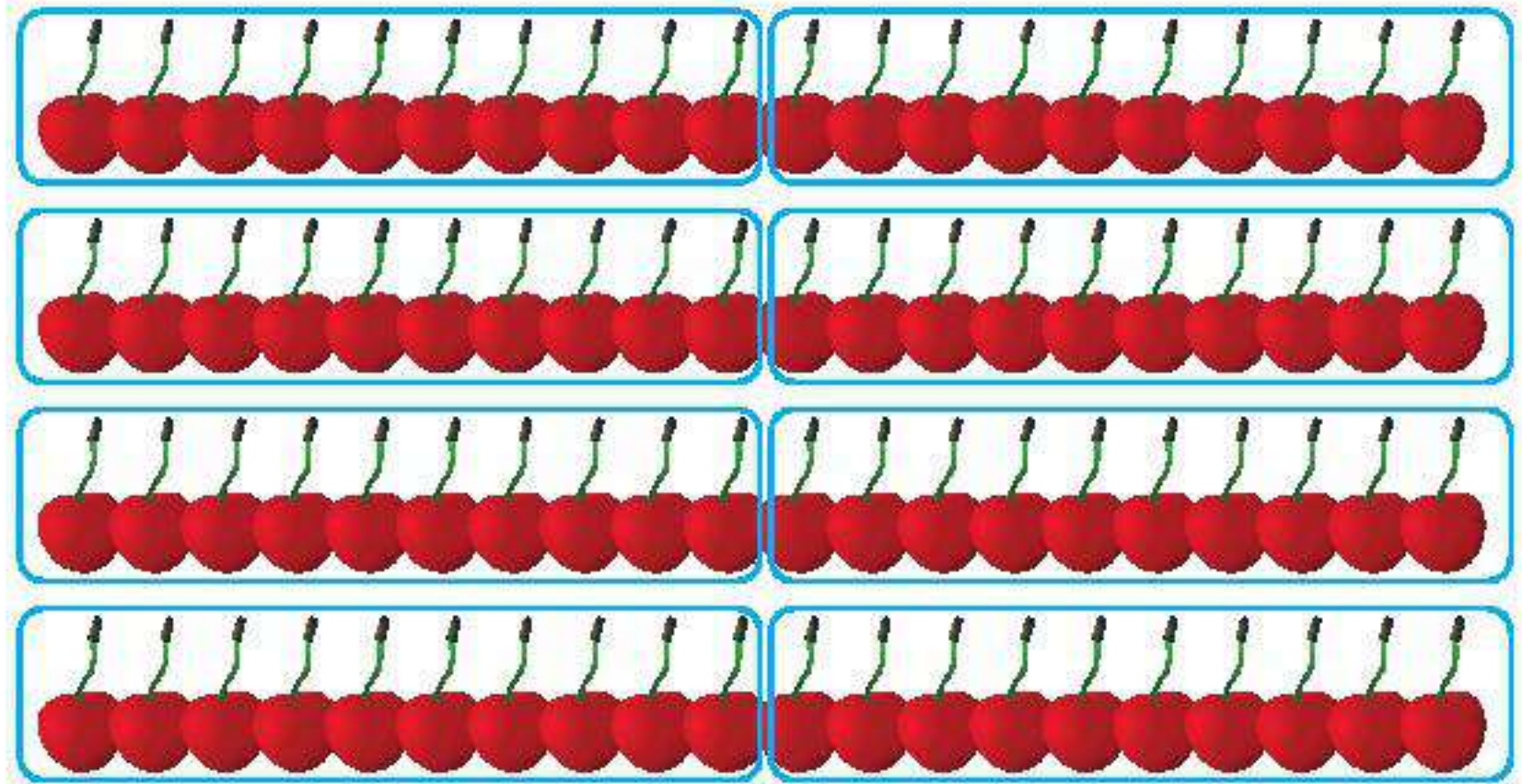
There are 7 apples in each group.



4. Mrs Kashif has 80 cherries. She wants to put only 10 cherries on a cake. How many cakes does she need?

$$80 \div 10 = 8$$

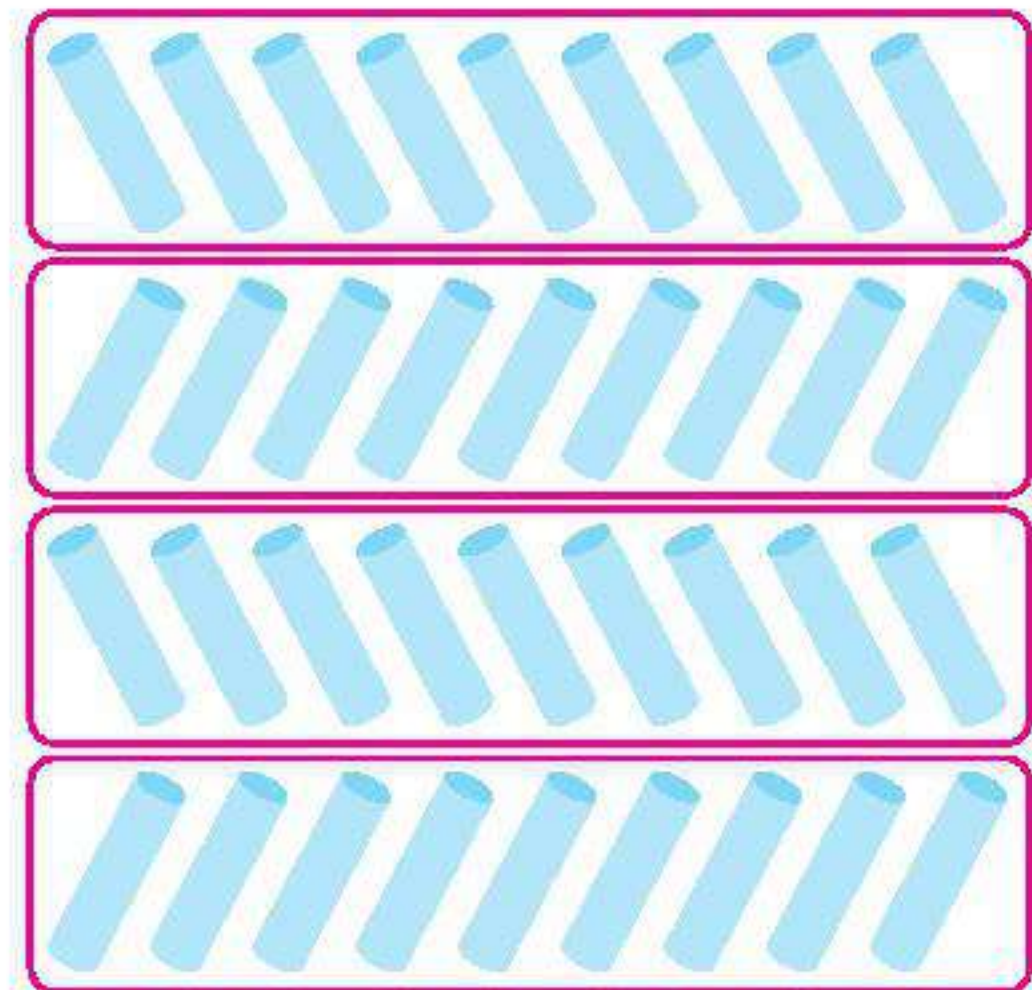
She needs 8 cakes.



5. Sami arranges 36 chalks equally in 4 boxes. How many chalks are there in each box?

$$36 \div 4 = 9$$

Sami puts 9 chalks in each box.



## 6. Fill in the blanks.

a  $10 \div 2 = 5$

b  $24 \div 3 = 8$

c  $45 \div 5 = 9$

d  $28 \div 4 = 7$

e  $21 \div 3 = 7$

f  $90 \div 10 = 9$

## Exercise 1

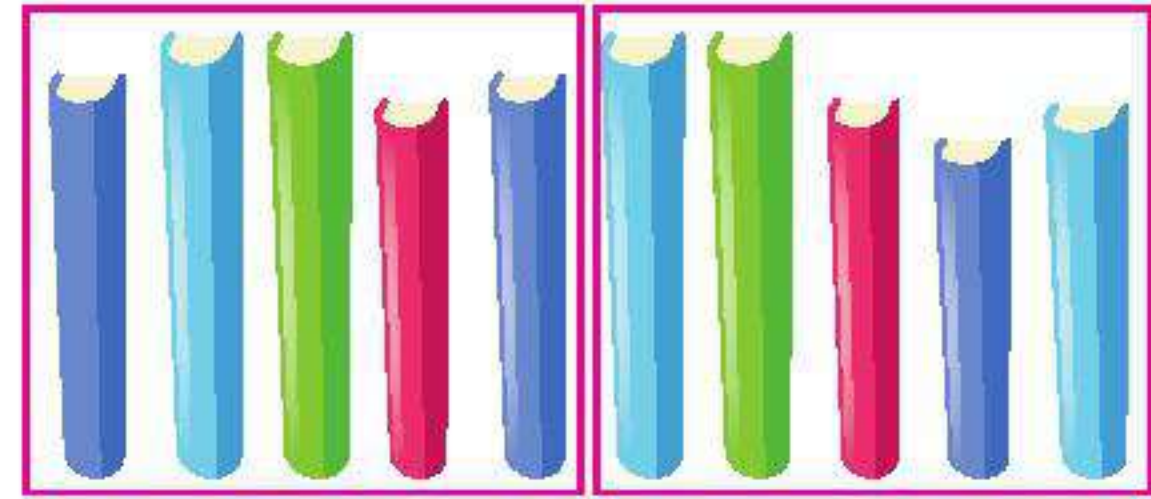
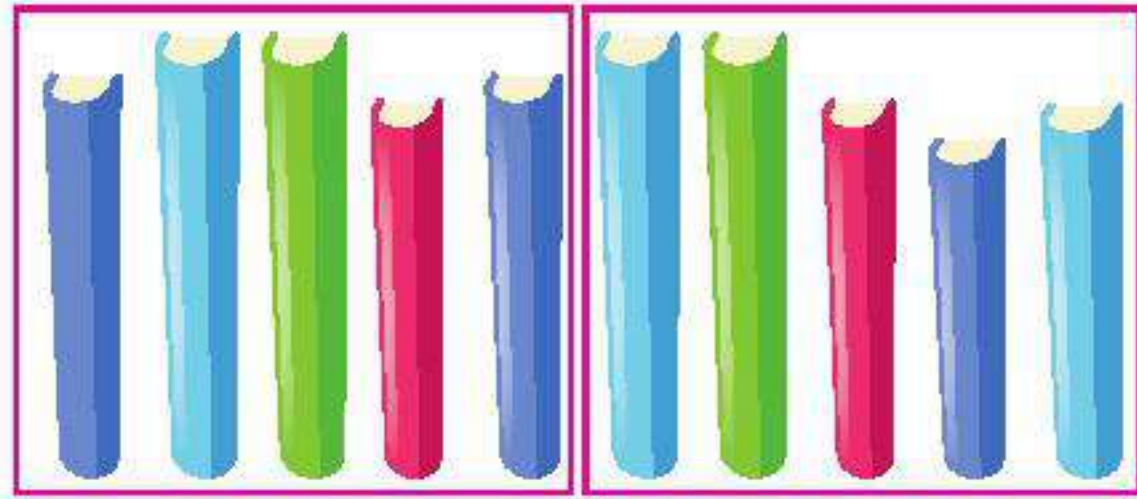
1. There are 18 toys. Divide them into 6 groups equally. How many toys are there in each group?



$$18 \div 6 = 3$$

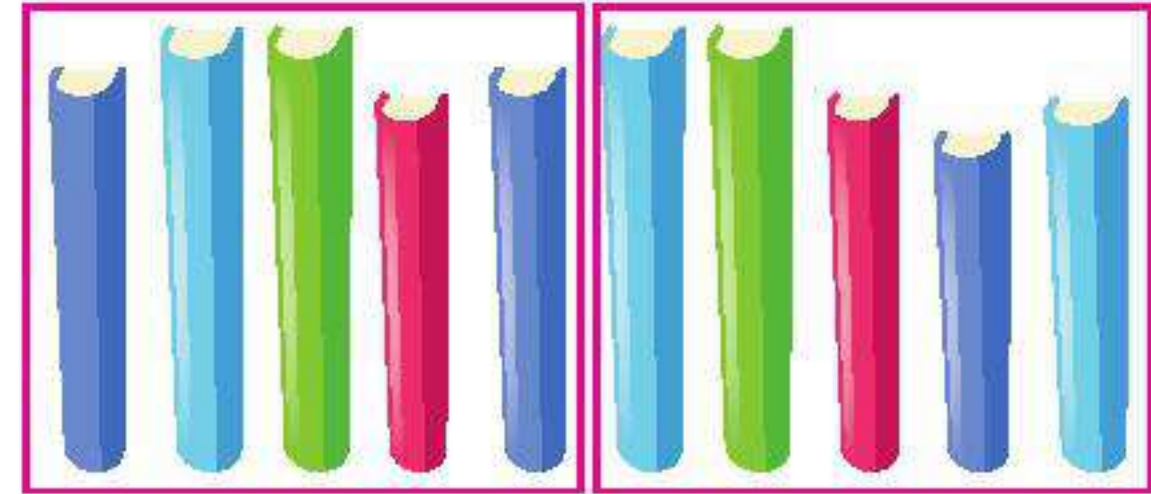
There are 3 toys in each group.

2. There are 30 books. Divide them into 6 groups equally. How many books are there in each group?

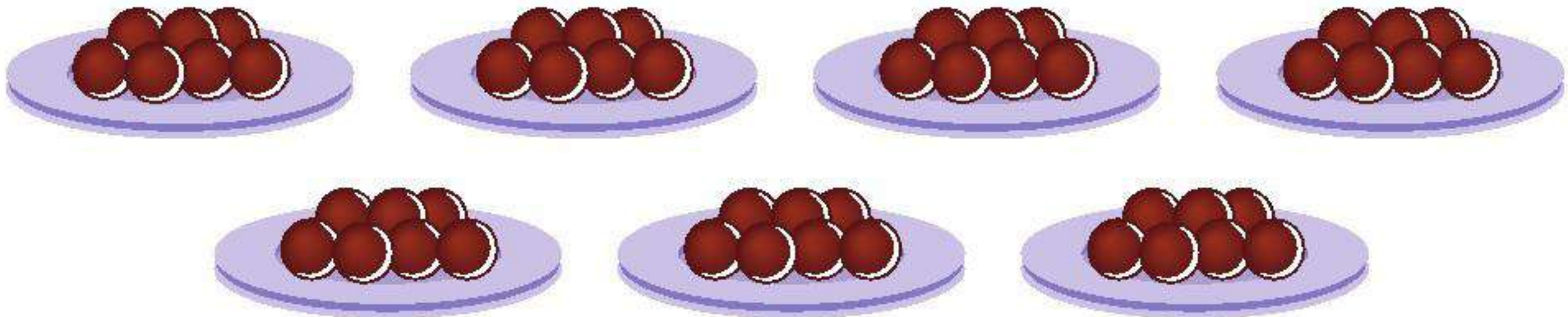


$$30 \div 6 = 5$$

There are 5 books in each group.



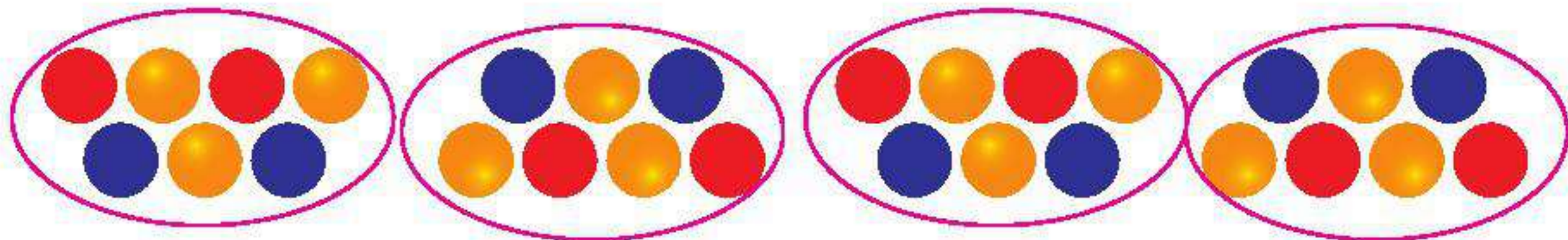
3. Nora has 49 sweets. She puts the sweets in groups of 7 equally. How many groups does she make?



$$49 \div 7 = 7$$

She makes 7 groups of 7 sweets.

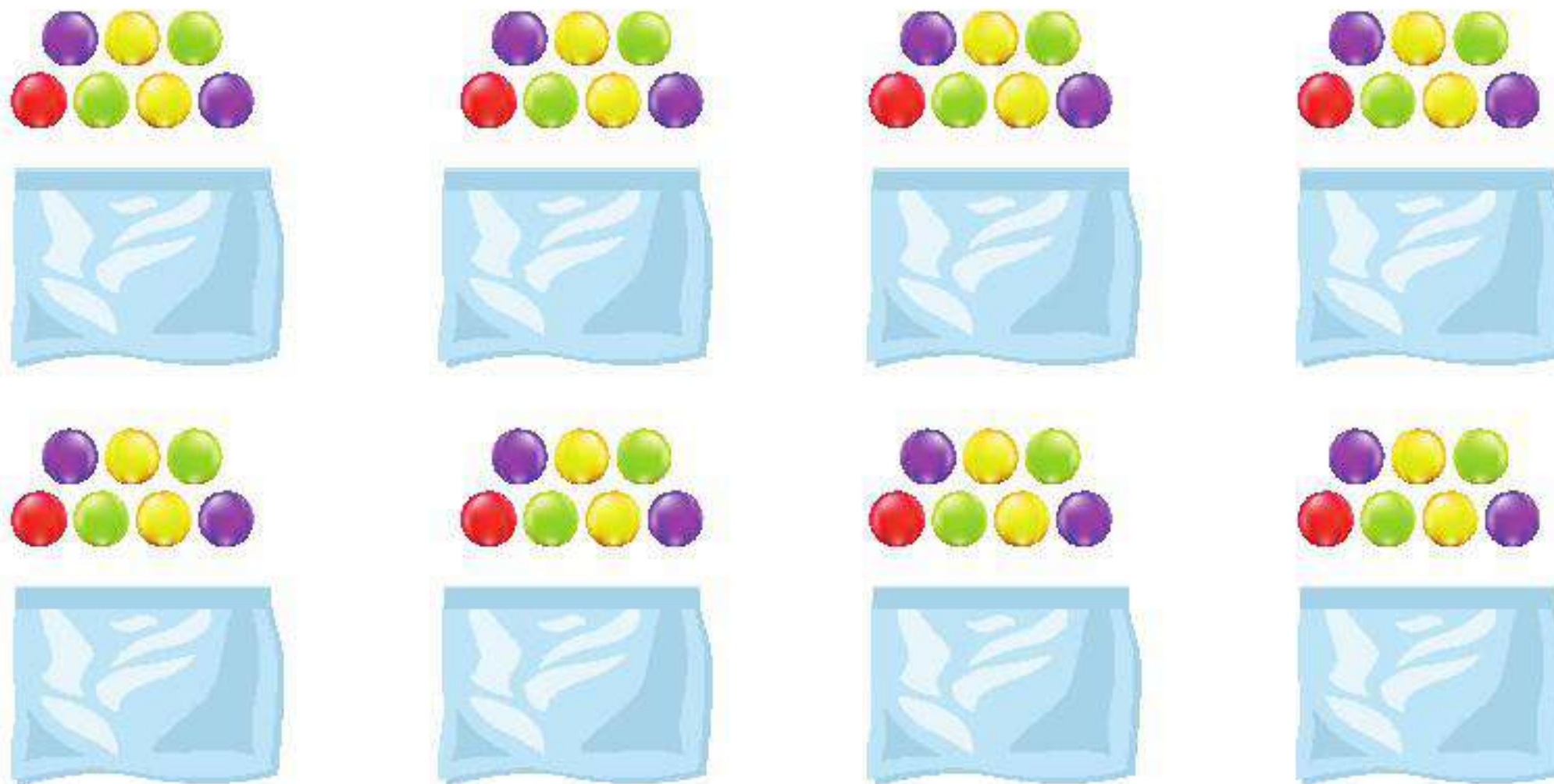
4. Mrs Shahid has 28 beads. She wants to paste 7 beads on each purse. How many purses does she need?



$$28 \div 7 = 4$$

She needs 4 purses.

5. Ahad has 56 marbles. He puts them equally in 7 bags. How many bags does he need?



$$56 \div 7 = 8$$

He needs 8 bags.

6. Fill in the blanks.

a  $24 \div 6 = 4$

b  $54 \div 6 = 9$

c  $14 \div 7 = 2$

d  $63 \div 7 = 9$

e  $30 \div 6 = 5$

f  $49 \div 7 = 7$



## Exercise 2

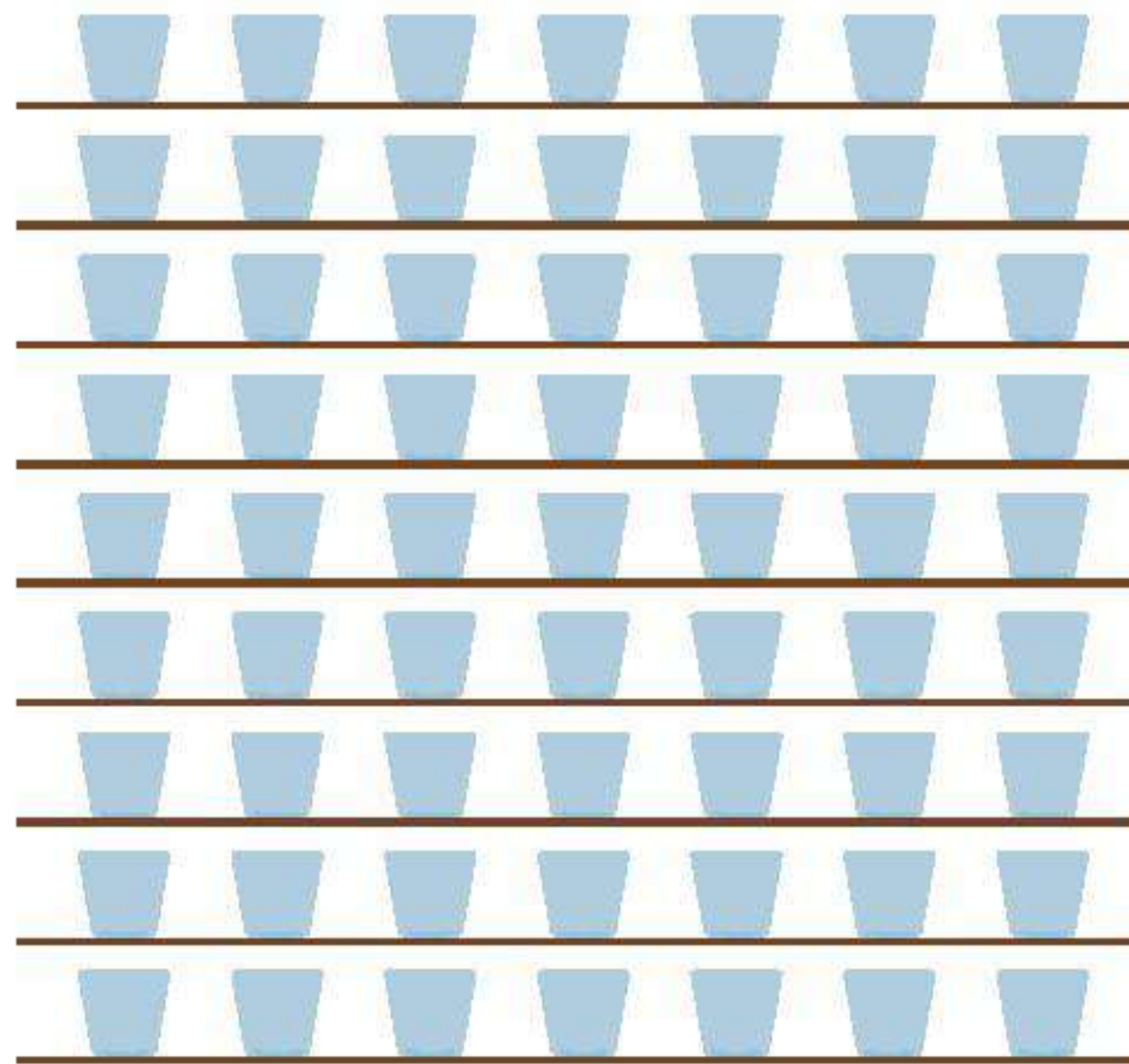
1. Saba has 32 chocolates. She packs the chocolates equally in 8 boxes. How many chocolates are there in each box?



$$32 \div 8 = 4$$

There are 4 chocolates in each box.

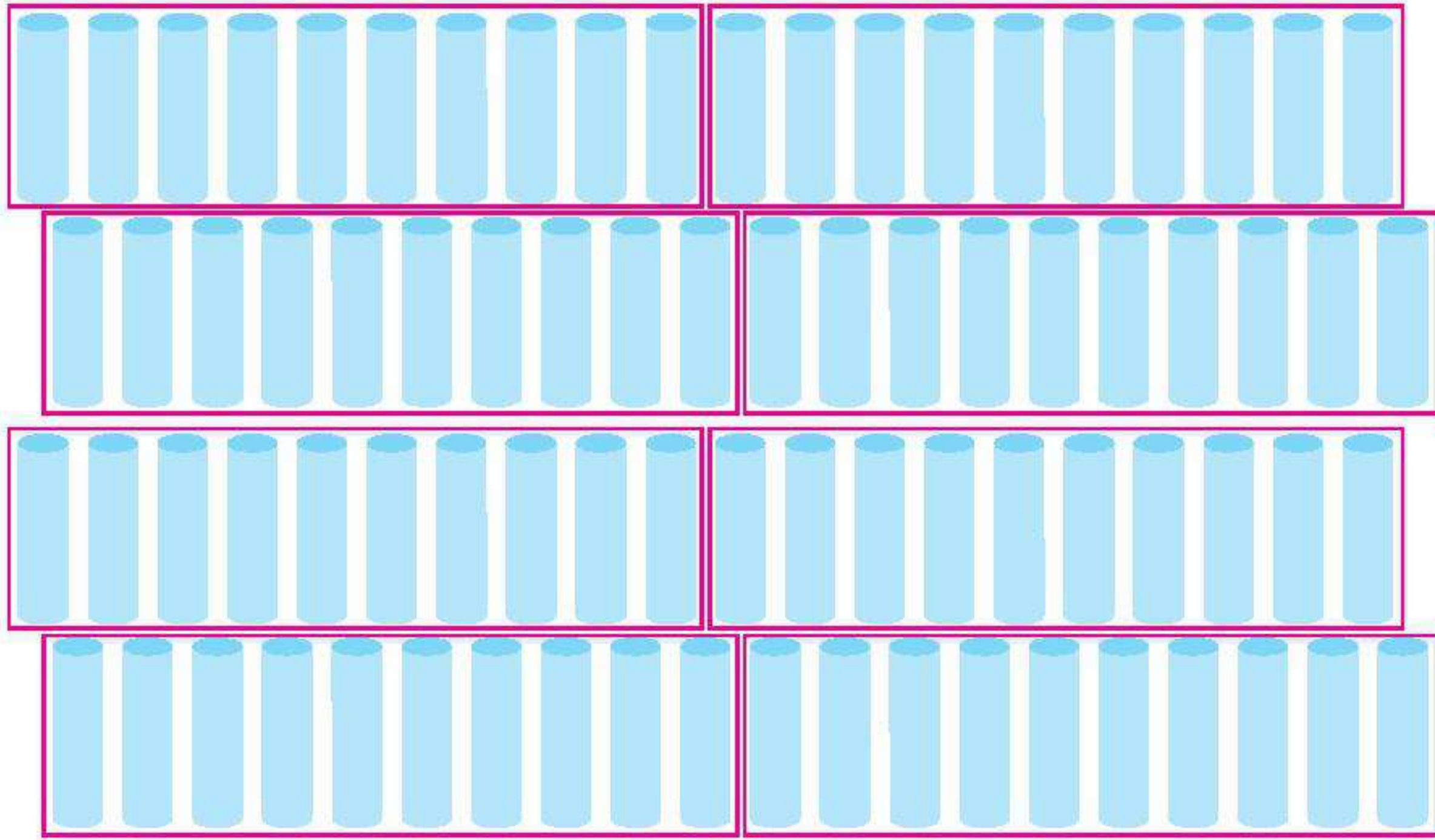
2. Sami arranges 63 glasses equally in 9 shelves. How many glasses are there in each shelf?



$$63 \div 9 = 7$$

There are 7 glasses in each shelf.

3. There are 80 chalks. Divide them into 8 groups equally. How many chalks are there in each group?



$$80 \div 8 = 10$$

There are 10 chalks in each group.

4. Fill in the blanks.

a  $24 \div 8 = 3$

b  $56 \div 8 = 7$

c  $18 \div 9 = 2$

d  $81 \div 9 = 9$

e  $72 \div 8 = 9$

f  $54 \div 9 = 6$

## Exercise 3

1. Divide.

$$\begin{array}{r} 31 \\ 2 \overline{) 62} \\ \underline{6} \phantom{2} \\ 02 \\ \underline{2} \\ 0 \end{array}$$

$$\begin{array}{r} 13 \\ 5 \overline{) 65} \\ \underline{5} \phantom{5} \\ 15 \\ \underline{15} \\ 0 \end{array}$$

$$\begin{array}{r} 18 \\ 3 \overline{) 52} \\ \underline{3} \phantom{2} \\ 24 \\ \underline{24} \\ 0 \end{array}$$

$$\begin{array}{r} 14 \\ 4 \overline{) 56} \\ \underline{4} \phantom{6} \\ 16 \\ \underline{16} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ 7 \overline{) 77} \\ \underline{7} \phantom{7} \\ 07 \\ \underline{7} \\ 0 \end{array}$$

$$\begin{array}{r} 36 \\ 2 \overline{) 72} \\ \underline{6} \phantom{2} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

$$\begin{array}{r} 17 \\ 4 \overline{) 68} \\ \underline{4} \phantom{8} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ 8 \overline{) 96} \\ \underline{8} \phantom{6} \\ 16 \\ \underline{16} \\ 0 \end{array}$$

$$\begin{array}{r} 23 \\ 3 \overline{) 69} \\ \underline{6} \phantom{9} \\ 09 \\ \underline{9} \\ 0 \end{array}$$

$$\begin{array}{r} 27 \\ 3 \overline{) 81} \\ \underline{6} \phantom{1} \\ 21 \\ \underline{21} \\ 0 \end{array}$$

$$\begin{array}{r} 11 \\ 9 \overline{) 99} \\ \underline{9} \phantom{9} \\ 09 \\ \underline{9} \\ 0 \end{array}$$

$$\begin{array}{r} 13 \\ 2 \overline{) 26} \\ \underline{2} \phantom{6} \\ 06 \\ \underline{6} \\ 0 \end{array}$$

2. Divide the following mentally. Recall the tables for help.

a  $12 \div 2 = 6$

b  $40 \div 4 = 10$

c  $27 \div 3 = 9$

d  $35 \div 5 = 7$

e  $16 \div 2 = 8$

f  $24 \div 3 = 8$

g  $49 \div 7 = 7$

h  $45 \div 9 = 5$

i  $64 \div 8 = 8$

j  $36 \div 4 = 9$

k  $12 \div 6 = 2$

l  $12 \div 3 = 4$

m  $54 \div 9 = 6$

n  $8 \div 2 = 4$

o  $18 \div 2 = 9$

p  $63 \div 7 = 9$

q  $25 \div 5 = 5$

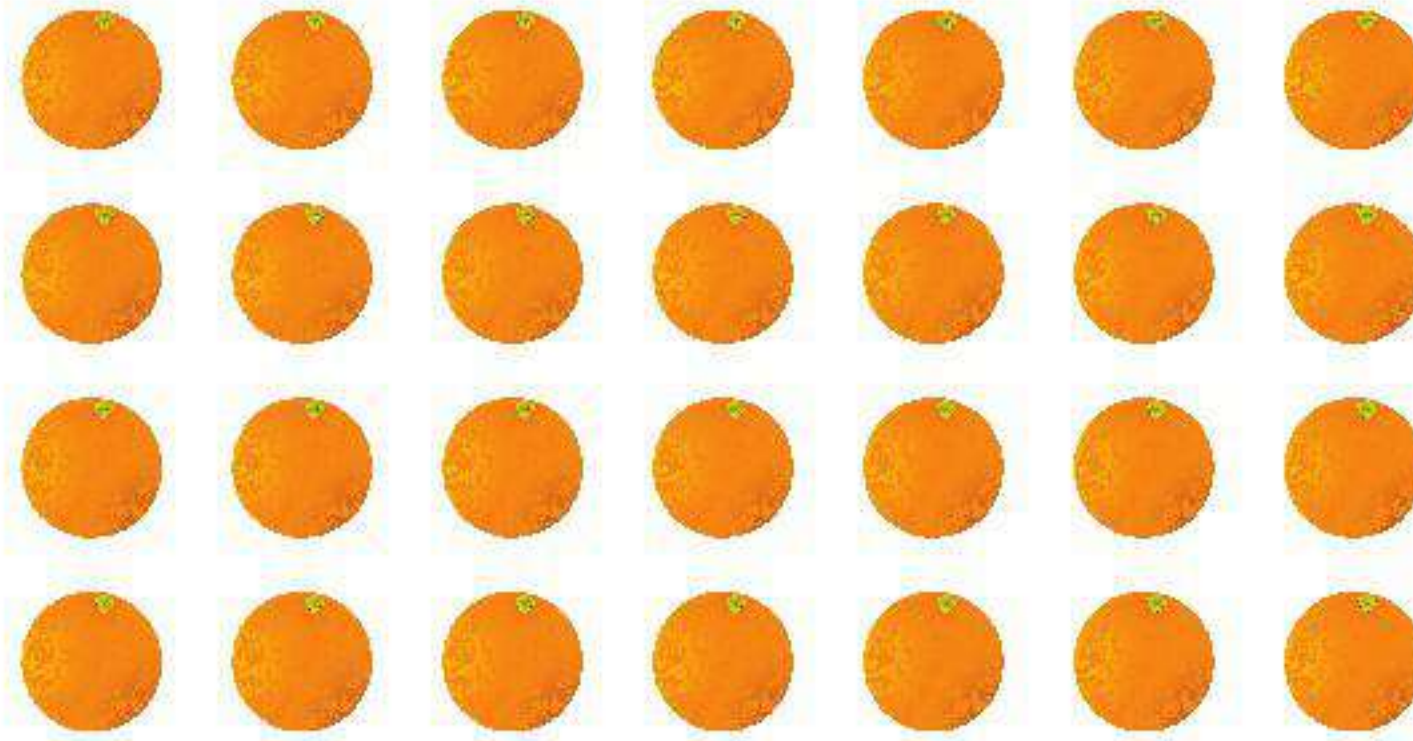
r  $56 \div 8 = 7$

s  $20 \div 4 = 5$

t  $12 \div 6 = 2$

## Exercise 4

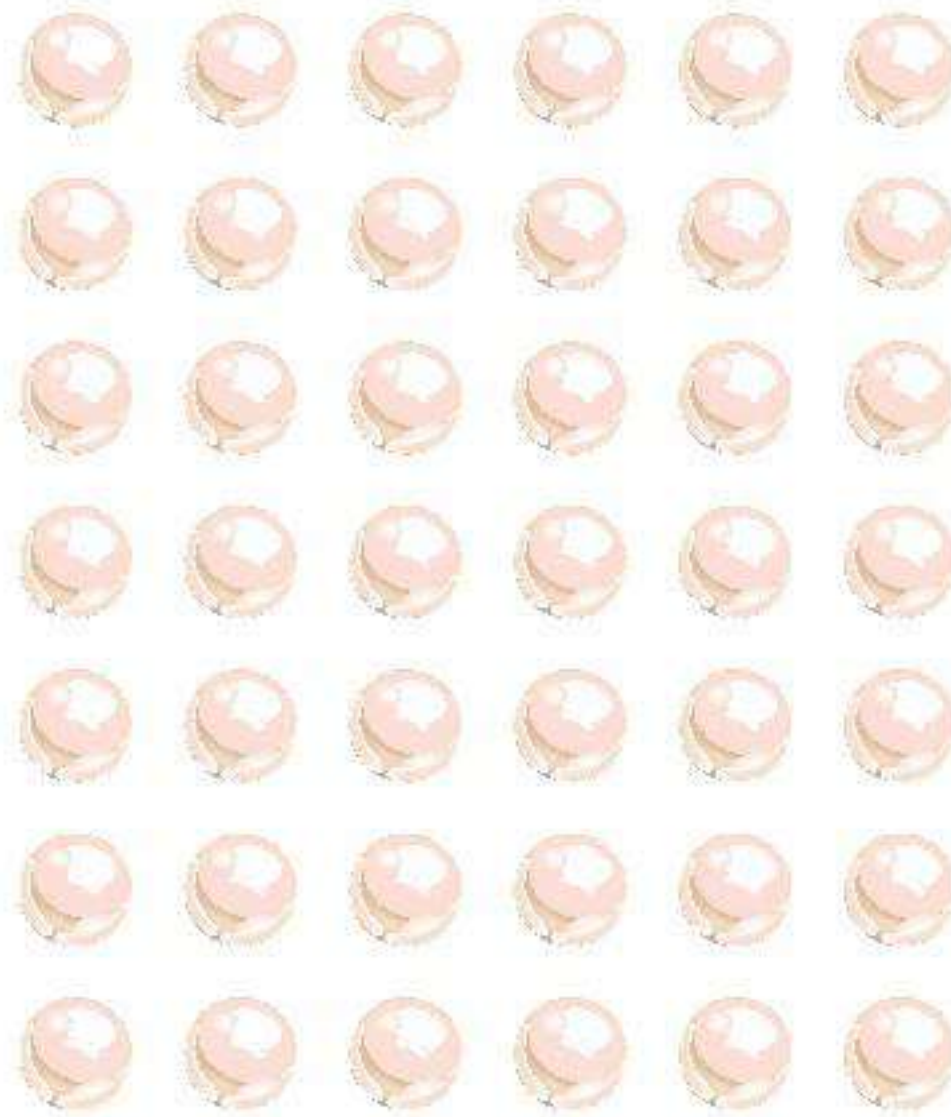
1. There are 28 oranges. Huma puts them equally in 7 bowls. How many oranges are there in each bowl?



$$28 \div 7 = 4$$

There are 4 oranges in each bowl.

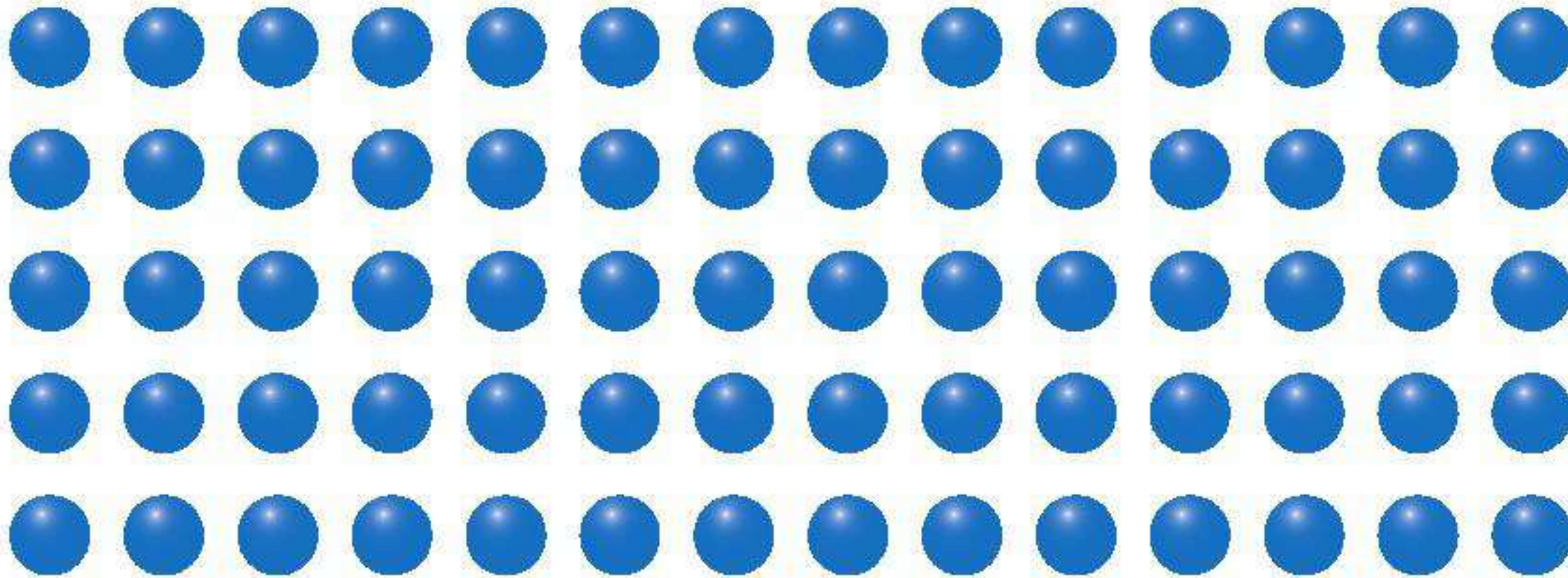
2. Maria has 42 beads. She puts 6 pearls on each clip. How many clips does she make?



$$42 \div 6 = 7$$

She makes 7 clips.

3. Asad has 81 marbles. He arranges them in groups of 9. How many groups does he make?



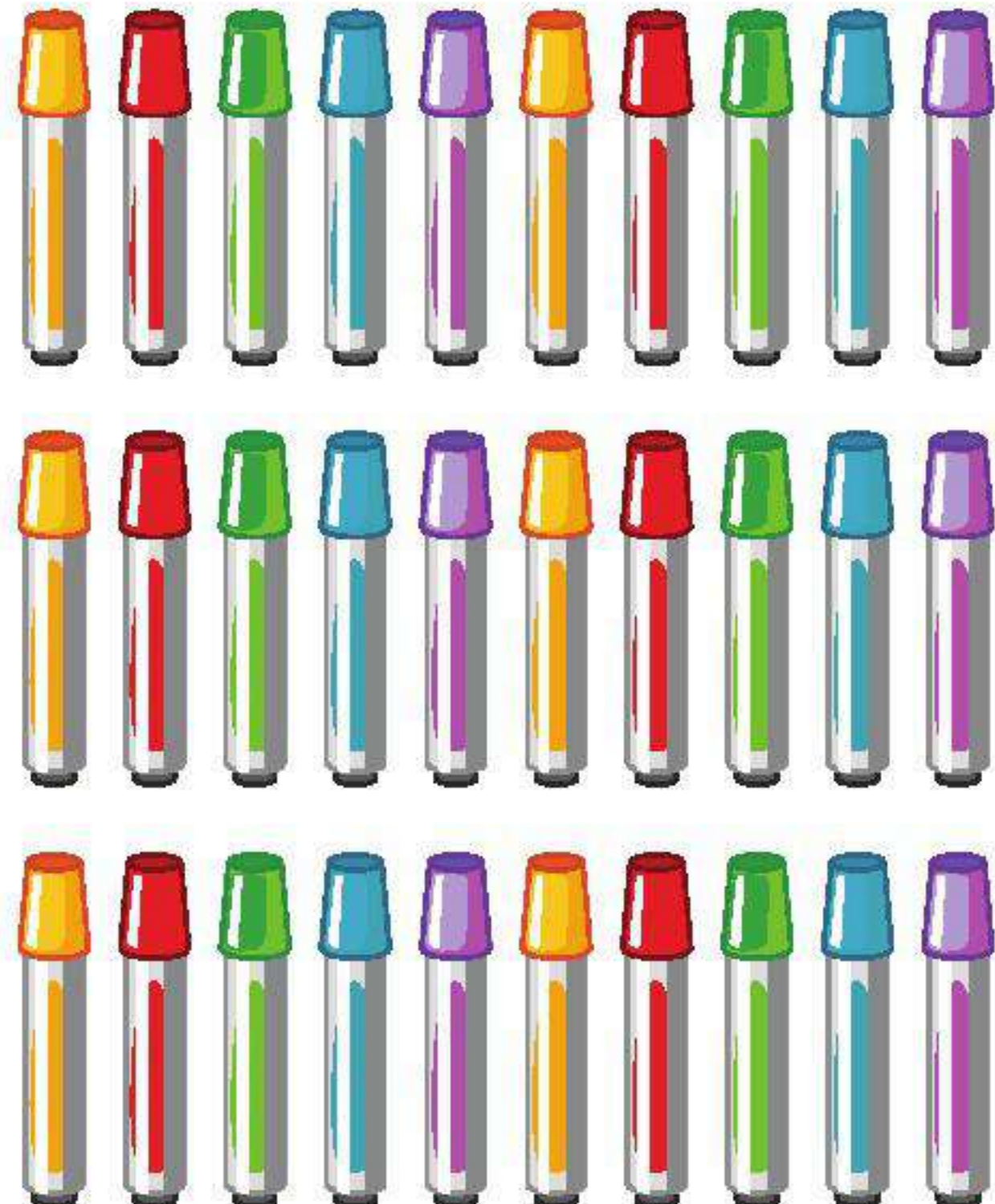
$$81 \div 9 = 9$$

There are 9 marbles in each group.

4. Taha puts 30 markers equally in 6 boxes. How many markers are there in each box?

$$30 \div 6 = 5$$

There are 5 markers in each box.



**Unit  
6**

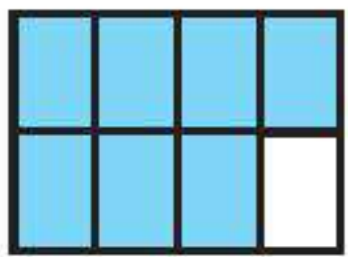
**Fractions**

**Recap Exercise**

**Recap**

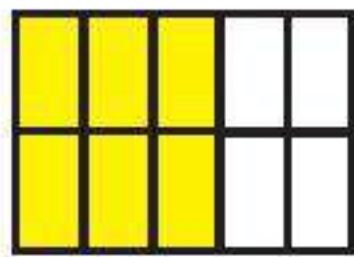
1. Color the parts to show the fraction.

a.



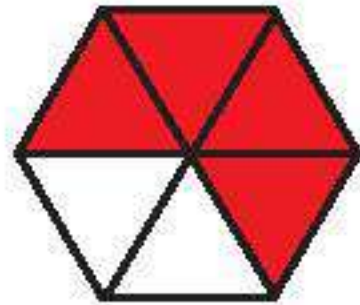
$$\frac{7}{8}$$

b.



$$\frac{6}{10}$$

c.



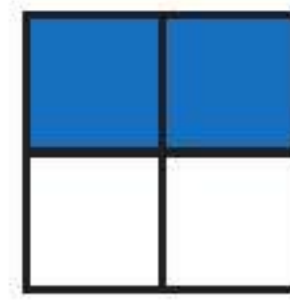
$$\frac{4}{6}$$

d.



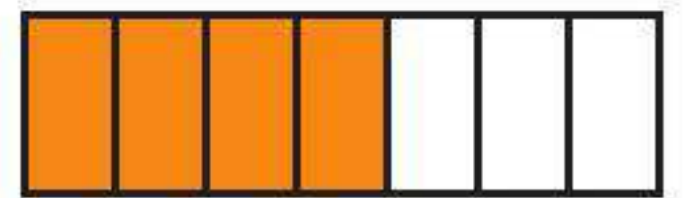
$$\frac{4}{5}$$

e.



$$\frac{2}{4}$$

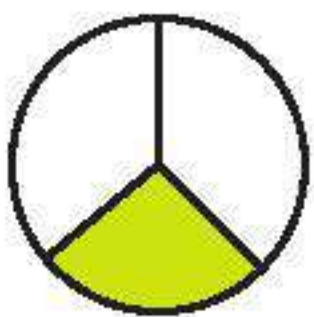
f.



$$\frac{4}{7}$$

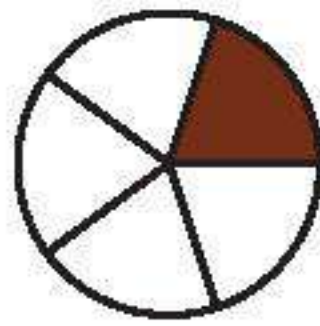
2. Write the fractions, and read them aloud.

a.



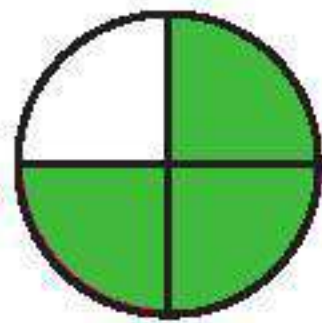
$$\frac{1}{3}$$

b.



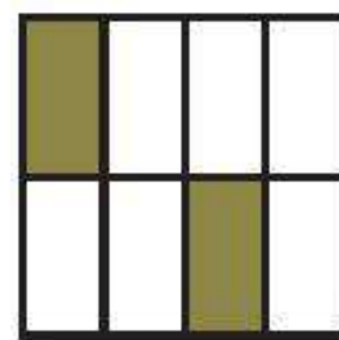
$$\frac{1}{5}$$

c.



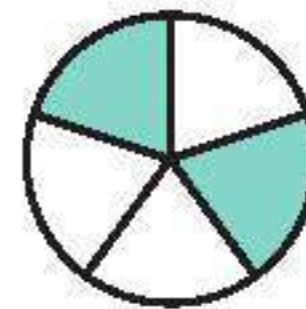
$$\frac{3}{4}$$

d.



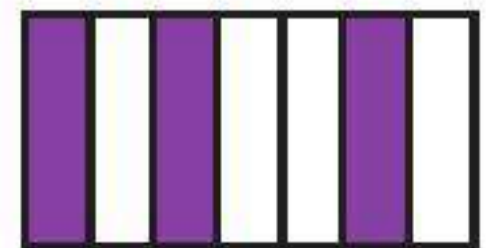
$$\frac{2}{8}$$

e.



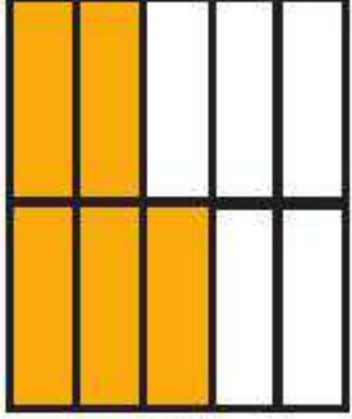
$$\frac{2}{5}$$

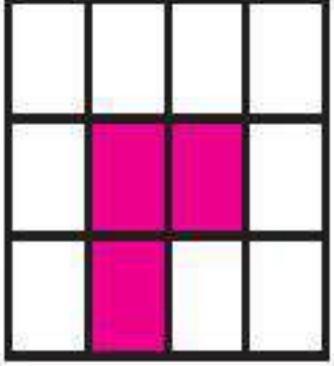
f.

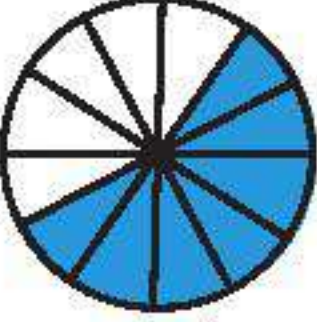


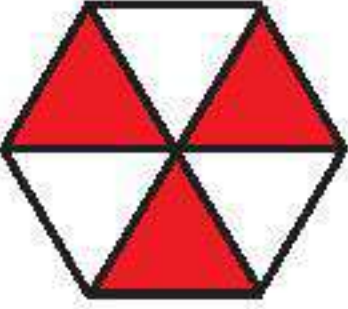
$$\frac{3}{7}$$

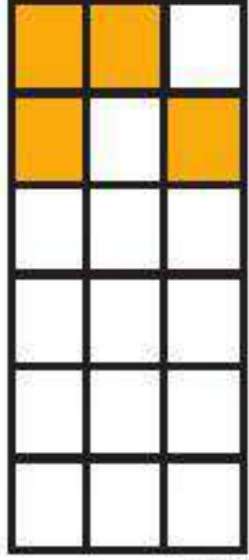
3. Match the figure to the correct fraction.


a. 

b. 

c. 

d. 

e. 

f. 

$\frac{4}{18}$        $\frac{7}{8}$        $\frac{3}{6}$        $\frac{5}{10}$        $\frac{7}{12}$        $\frac{3}{12}$

### Exercise 1

1. Sort the fractions below as proper or improper. Then write them in the correct column.

$\frac{9}{4}$        $\frac{15}{17}$        $\frac{5}{5}$        $\frac{18}{23}$        $\frac{19}{12}$        $\frac{7}{10}$        $\frac{26}{21}$

$\frac{14}{8}$        $\frac{5}{9}$        $\frac{6}{11}$        $\frac{13}{4}$        $\frac{12}{12}$        $\frac{22}{30}$        $\frac{11}{2}$

Proper Fractions				Improper Fractions			
$\frac{9}{4}$	$\frac{15}{17}$	$\frac{18}{23}$	$\frac{7}{10}$	$\frac{5}{5}$	$\frac{19}{12}$	$\frac{26}{21}$	$\frac{14}{8}$
$\frac{5}{9}$	$\frac{6}{11}$	$\frac{22}{30}$		$\frac{13}{4}$	$\frac{12}{12}$	$\frac{11}{2}$	



## Exercise 2

1. Match each fraction to its equivalent fraction.

$\frac{3}{9}$	$\frac{6}{21}$
$\frac{3}{5}$	$\frac{9}{27}$
$\frac{1}{4}$	$\frac{12}{20}$
$\frac{5}{6}$	$\frac{6}{24}$
$\frac{2}{7}$	$\frac{35}{42}$

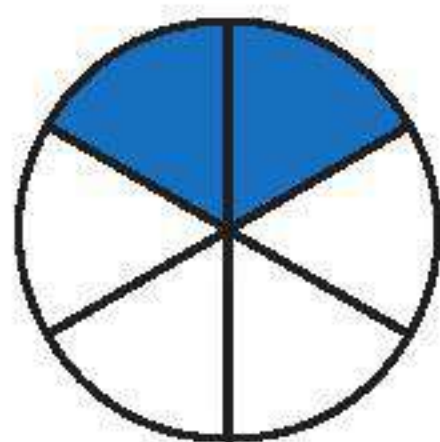
2. Fill in the blanks.

a) $\frac{2}{3} = \frac{14}{21}$ <small><math>\times 7</math>   <math>\times 7</math></small>	b) $\frac{3}{7} = \frac{12}{28}$	c) $\frac{1}{6} = \frac{6}{36}$
d) $\frac{3}{4} = \frac{12}{16}$	e) $\frac{4}{5} = \frac{36}{45}$	f) $\frac{1}{8} = \frac{7}{56}$
g) $\frac{3}{8} = \frac{9}{24}$	h) $\frac{2}{6} = \frac{10}{30}$	i) $\frac{3}{5} = \frac{18}{30}$
j) $\frac{1}{4} = \frac{8}{32}$	k) $\frac{4}{7} = \frac{28}{49}$	l) $\frac{5}{9} = \frac{35}{63}$

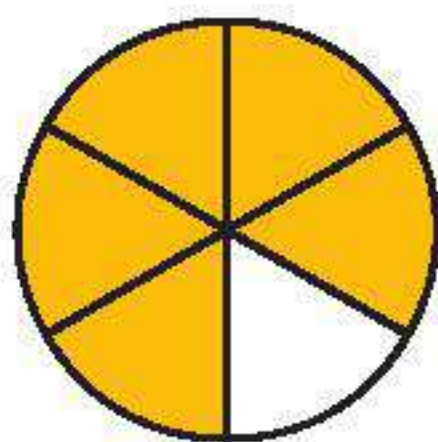
**Exercise 3**

1. Read the fractions and shade the figures. Circle the bigger fraction.

a)

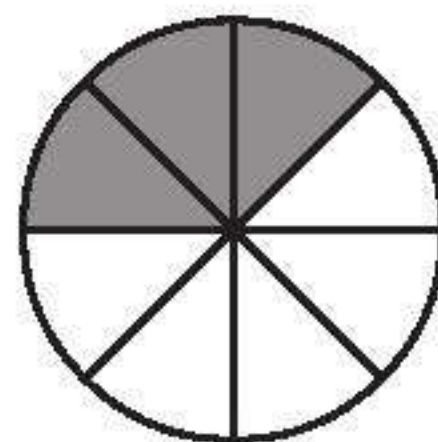


$$\frac{2}{6}$$

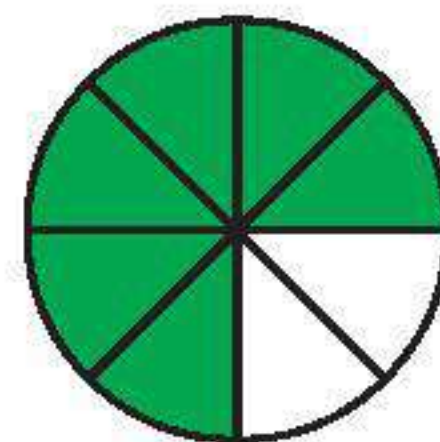


$$\frac{5}{6}$$

b)

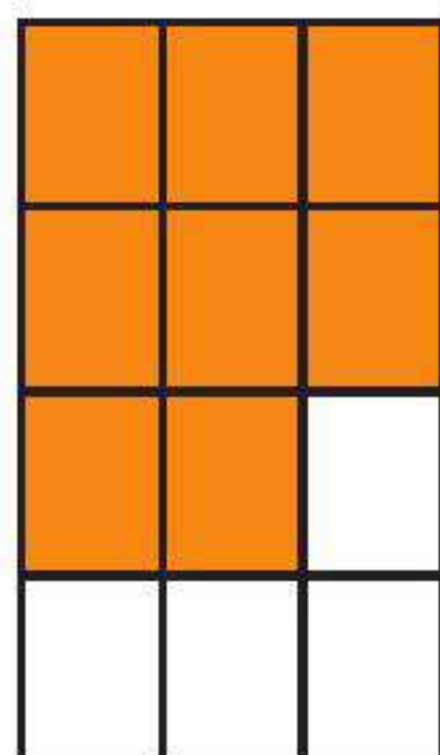


$$\frac{3}{8}$$

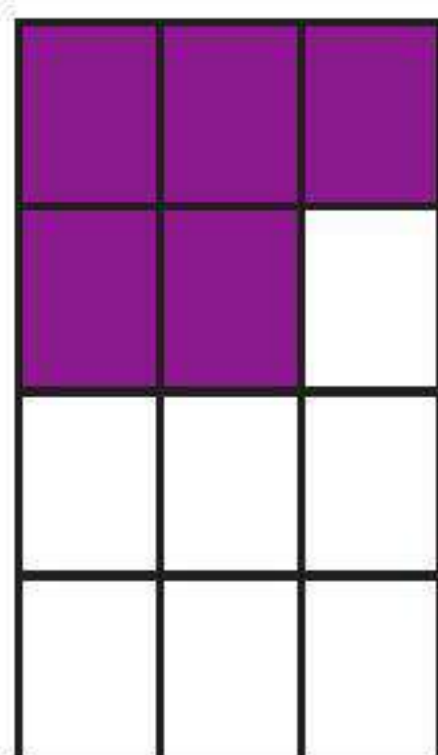


$$\frac{6}{8}$$

c)



$$\frac{8}{12}$$



$$\frac{5}{12}$$

d)



$$\frac{6}{7}$$



$$\frac{4}{7}$$

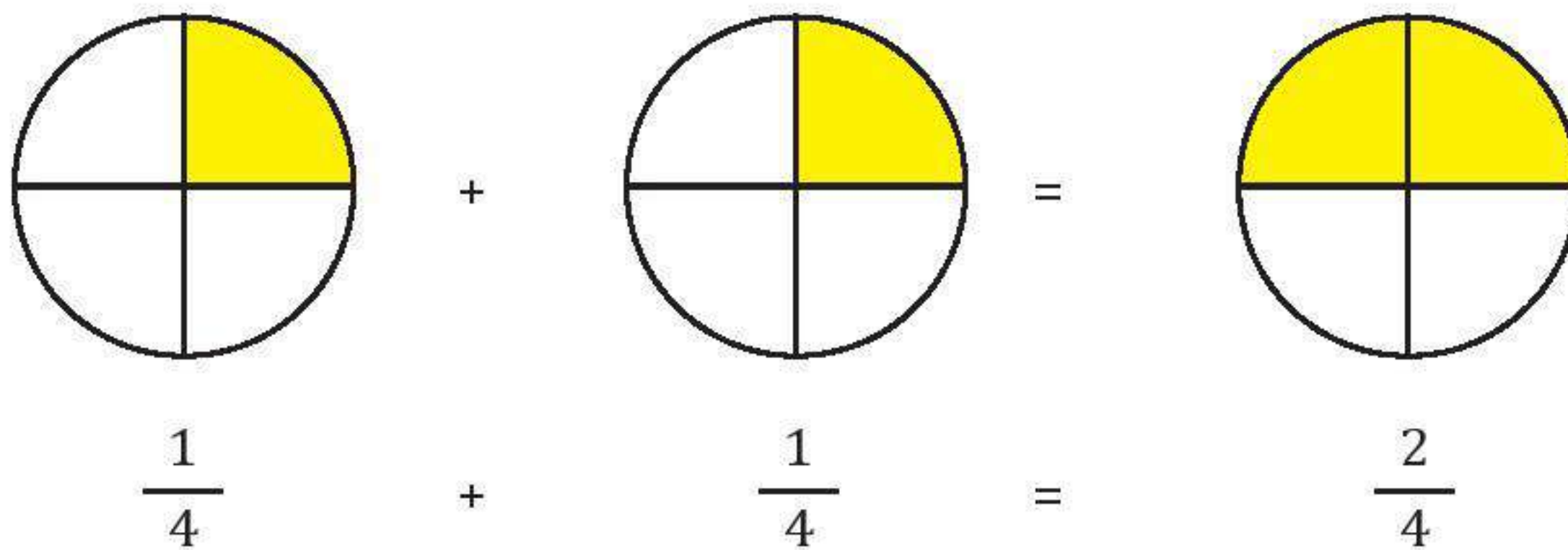
2. Fill in the blanks with  $<$ ,  $>$ ,  $=$ .

a) $\frac{3}{5} > \frac{1}{5}$	b) $\frac{4}{7} > \frac{2}{7}$	c) $\frac{1}{6} < \frac{5}{6}$
d) $\frac{3}{4} = \frac{3}{4}$	e) $\frac{4}{10} < \frac{7}{10}$	f) $\frac{3}{8} < \frac{7}{8}$

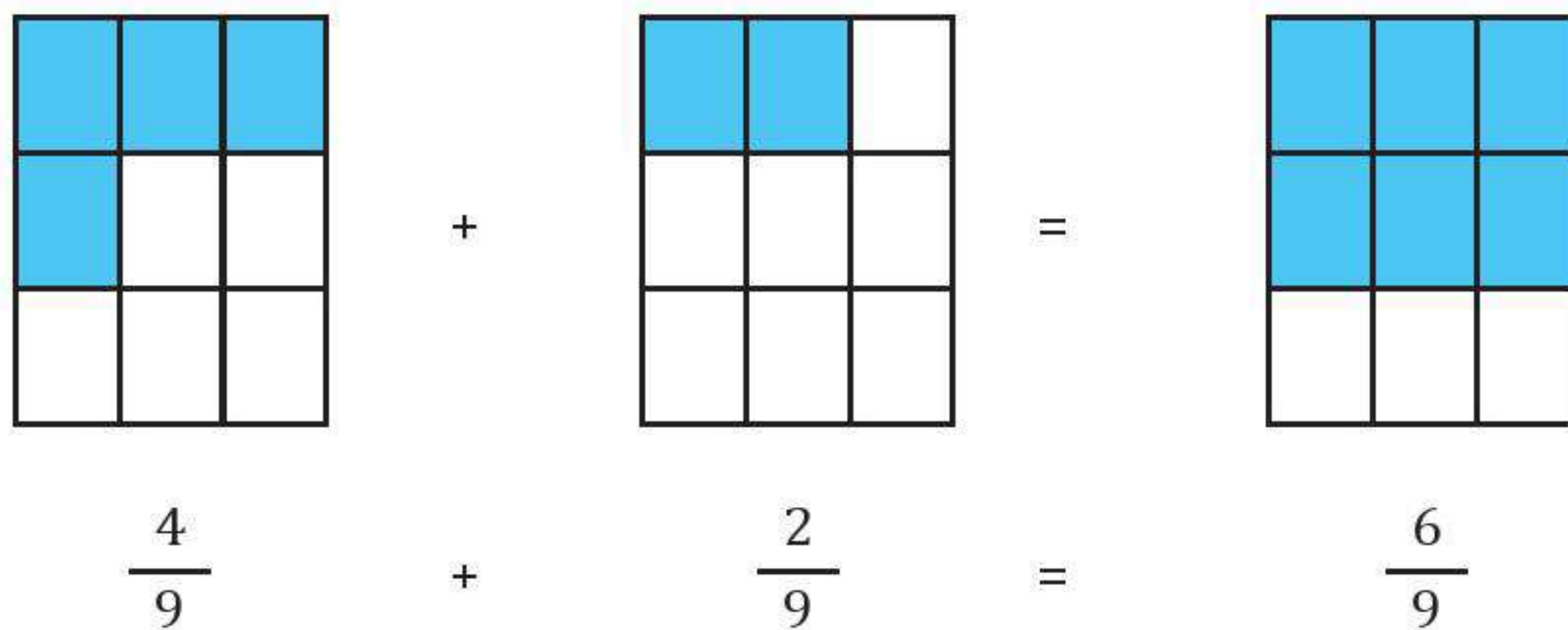
## Exercise 4

1. Shade the shapes and then add the fractions.

a)



b)



2. Add the fractions.

a) $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$	b) $\frac{1}{6} + \frac{3}{6} = \frac{4}{6}$	c) $\frac{2}{9} + \frac{4}{9} = \frac{6}{9}$
d) $\frac{3}{7} + \frac{1}{7} = \frac{4}{7}$	e) $\frac{5}{10} + \frac{2}{10} = \frac{7}{10}$	f) $\frac{3}{8} + \frac{2}{8} = \frac{7}{8}$
g) $\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$	h) $\frac{2}{6} + \frac{1}{6} = \frac{3}{6}$	i) $\frac{1}{9} + \frac{6}{9} = \frac{7}{9}$

# Unit 7

## Length, Mass and Capacity

### Recap Exercise

1. Look at the pictures and choose the best unit to measure them.



a) The best measure for this book will be: cm

b) The best measure for this chair will be: cm



c) The best measure for this car will be: m

d) The best measure for this tree will be: m



e) The best measure for this shirt will be: m

f) The best measure for this cupboard will be: m



2. Measure the following lines.

a) \_\_\_\_\_

8 cm

b) \_\_\_\_\_

5 cm

c) \_\_\_\_\_

12 cm

d) \_\_\_\_\_

6 cm

3. Add or subtract.

$$\begin{array}{r} \text{a)} \quad 2 \text{ m} \quad 3 \text{ m} \\ + \quad \quad 4 \text{ m} \\ \hline 2 \text{ m} \quad 7 \text{ m} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 4 \text{ m} \quad 0 \text{ m} \\ + \quad 1 \text{ m} \quad 5 \text{ m} \\ \hline 5 \text{ m} \quad 5 \text{ m} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 5 \text{ m} \quad 8 \text{ m} \\ - \quad 2 \text{ m} \quad 4 \text{ m} \\ \hline 3 \text{ m} \quad 4 \text{ m} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 1 \text{ m} \quad 2 \text{ cm} \\ + \quad \quad 6 \text{ cm} \\ \hline 1 \text{ m} \quad 8 \text{ cm} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 4 \text{ m} \quad 0 \text{ cm} \\ + \quad 3 \text{ m} \quad 7 \text{ cm} \\ \hline 7 \text{ m} \quad 7 \text{ cm} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 7 \text{ m} \quad 6 \text{ cm} \\ - \quad 2 \text{ m} \quad 2 \text{ cm} \\ \hline 5 \text{ m} \quad 4 \text{ cm} \end{array}$$

4. Look at these items and estimate their mass. Write them in the correct box.



aquarium



frame



coins



teddy bear



pencil



radio



5 kg oil



drink

More than 2 kg	5 kg oil	Radio	Aquarium
Less than 2 kg	Pencil	Drink	Frame

5. What is the mass?

a)



800 g

b)



2 kg

c)



400 g

d)



3 kg

6. Add or subtract.

a)

$$\begin{array}{r} 780 \text{ g} \\ - 230 \text{ g} \\ \hline 550 \text{ g} \end{array}$$

b)

$$\begin{array}{r} 316 \text{ g} \\ + 121 \text{ g} \\ \hline 437 \text{ g} \end{array}$$

c)

$$\begin{array}{r} 550 \text{ g} \\ + 208 \text{ g} \\ \hline 758 \text{ g} \end{array}$$

d)

$$\begin{array}{r} 26 \text{ kg} \\ + 2 \text{ kg} \\ \hline 28 \text{ kg} \end{array}$$

e)

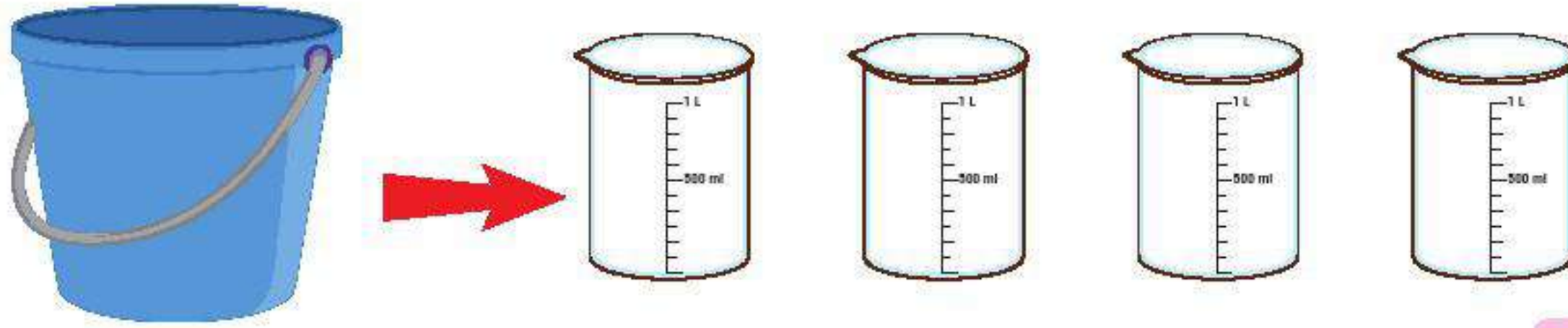
$$\begin{array}{r} 25 \text{ kg} \\ + 61 \text{ kg} \\ \hline 86 \text{ kg} \end{array}$$

f)

$$\begin{array}{r} 49 \text{ kg} \\ - 11 \text{ kg} \\ \hline 38 \text{ kg} \end{array}$$

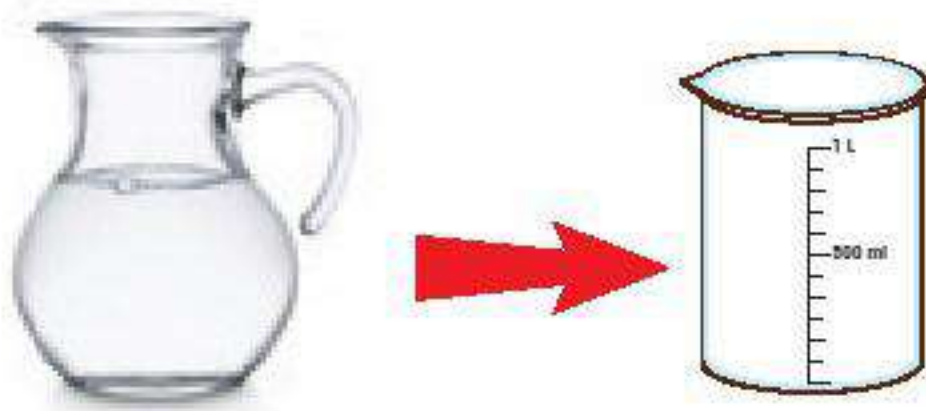
7. What is the capacity of each container?

a)



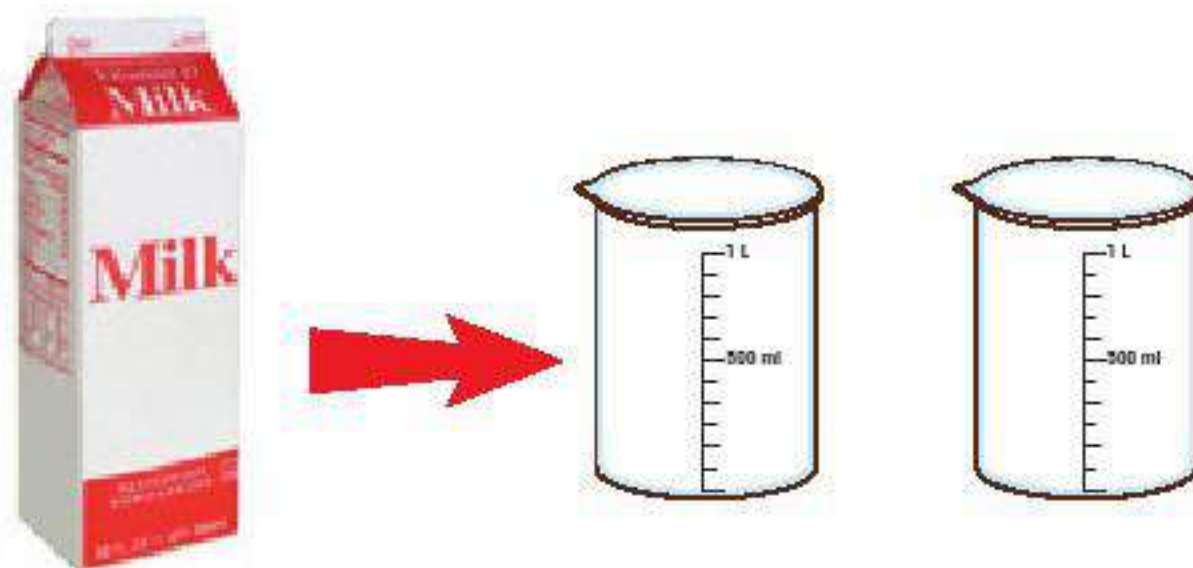
4 litres

b)



1 litre

c)



2 litres

8. Add or subtract.

$$\begin{array}{r} \text{a)} \quad 1 \quad 7 \quad 5 \text{ ml} \\ + \quad \quad 1 \quad 0 \text{ ml} \\ \hline 1 \quad 8 \quad 5 \text{ ml} \end{array}$$

$$\begin{array}{r} \text{b)} \quad 5 \quad 8 \quad 6 \text{ ml} \\ - \quad 2 \quad 0 \quad 4 \text{ ml} \\ \hline 3 \quad 8 \quad 2 \text{ ml} \end{array}$$

$$\begin{array}{r} \text{c)} \quad 3 \quad 7 \quad 0 \text{ ml} \\ + \quad 2 \quad 3 \quad 9 \text{ ml} \\ \hline 6 \quad 0 \quad 8 \text{ ml} \end{array}$$

$$\begin{array}{r} \text{d)} \quad 3 \quad 5 \text{ l} \\ + \quad \quad 4 \text{ l} \\ \hline 3 \quad 9 \text{ l} \end{array}$$

$$\begin{array}{r} \text{e)} \quad 8 \quad 9 \text{ l} \\ - \quad 2 \quad 1 \text{ l} \\ \hline 6 \quad 8 \text{ l} \end{array}$$

$$\begin{array}{r} \text{f)} \quad 7 \quad 1 \text{ l} \\ - \quad 3 \quad 6 \text{ l} \\ \hline 3 \quad 5 \text{ l} \end{array}$$

## Exercise 1

1. Add the following. The first one has been solved for you.

a m cm

$$\begin{array}{r} 2 \quad 7 \quad 4 \\ + \quad 6 \quad 1 \quad 3 \\ \hline 8 \quad 8 \quad 7 \end{array}$$

b m cm

$$\begin{array}{r} 1 \quad 5 \quad 6 \quad 0 \\ + \quad \quad 2 \quad 3 \quad 2 \\ \hline 1 \quad 7 \quad 9 \quad 2 \end{array}$$

c km m

$$\begin{array}{r} 2 \quad 3 \quad 5 \quad 0 \\ + \quad 2 \quad 6 \quad 2 \quad 6 \\ \hline 4 \quad 9 \quad 7 \quad 6 \end{array}$$

d m cm

$$\begin{array}{r} 4 \quad 5 \quad 7 \quad 7 \\ + \quad 3 \quad 0 \quad \quad 2 \\ \hline 7 \quad 5 \quad 7 \quad 9 \end{array}$$

e km m

$$\begin{array}{r} 7 \quad 2 \quad 2 \quad 1 \quad 7 \\ + \quad \quad 6 \quad 3 \quad 0 \quad 0 \\ \hline 7 \quad 8 \quad 5 \quad 1 \quad 7 \end{array}$$

f m cm

$$\begin{array}{r} 2 \quad 3 \quad 1 \quad 5 \quad 4 \\ + \quad 5 \quad 5 \quad 4 \quad 0 \quad 2 \\ \hline 7 \quad 8 \quad 5 \quad 5 \quad 6 \end{array}$$

2. Sara has a rope that is 52 m 26 cm long. Nida has a rope that measures 17 m 31 cm. What is the total length of the ropes the girls have?



The rope is 69 m 57 cm long.

	m	cm
	52	26
+	17	31
	69	57



3. A bus travels 12 km 500 m on Friday. It travels 16 km 260 m on Saturday. What is the total distance the bus travels on the two days?



The bus travels 28 km 760m on the two days.

	km	m
	12	500
	16	260
+	28	760

## Exercise 2

1. Subtract the following. The first one has been solved for you.

a	m	cm
	9	5 5
	- 6	2 3
	3	3 2

b	m	cm
	3 8	4 9
	- 5	3 2
	3 3	1 7

c	km	m
	8 7	6 6
	- 3 0	2 4
	5 7	4 2

d	m	cm
	6 5	3 5
	- 5 0	2
	1 5	3 3

e	km	m
	5 8	6 2 4
	- 5	2 1 0
	5 3	4 1 4

f	km	m
	6 3	8 5 9
	- 2 2	2 0 6
	4 1	6 5 3

2. A wall is 12 m 85 cm long. Nadeem paints 6 m 60 cm of the wall before lunch. What length of the wall is left to be painted?



	m	cm
	12	85
-	6	60
<hr/>		
	6	25
<hr/>		

There is 6m 25 cm of the wall left to be painted.

3. The distance between Hamid's house and his school is 8 km 650 m. He has covered a distance of 4 km 320 m. What distance is left for him to cover?



	km	m
	8	650
-	4	320
<hr/>		
	4	330
<hr/>		

Hamid has to cover 4 km 330 .

### Exercise 3

1. Add the following. The first one has been solved for you.

a	kg	g
	5	2 4
+	3	7 3
	8	9 7

b	kg	g
	1 2	0 5
+	6	6 2
	1 8	6 7

c	kg	g
	3 3	2 0 3
+	4 1	5 6
	7 4	2 5 9

d	kg	g
	4 5	0 4 4
+	2 6	5 0 2
	7 1	5 4 6

e	kg	g
	7 4	2 1 7
+	3	3 0 0
	7 7	5 1 7

f	kg	g
	4 9	3 5 6
+	2 5	1 5 8
	7 4	5 1 4

2. Alia has 15 kg 210 g of flour. She buys 24 kg 460g more. How much flour does she have altogether?

240 g + 460 g = 700

15 kg + 24 kg = 39

She has 39 kg 700 g flour altogether.



	kg	g
	15	240
+	24	460
	39	700

3. Aamir buys 25 kg 500 g of onions and 23 kg 275 g of potatoes for his restaurant. What is the total mass of the items?



	kg	g
	25	500
	23	275
+	48	775

The total mass of both items is 48 kg 775 g

## Exercise 4

1. Subtract the following. The first one has been solved for you.

a	kg	g
	9	7 4
	-	3 2 3
	6	5 1

b	kg	g
	1 8	6 5
	-	5 1 2
	1 3	5 3

c	kg	g
	7 3	4 0 8
	-	4 1 3 6
	3 2	3 7 2

d	kg	g
	5 9	5 4 4
	-	2 3 3 4
	3 6	5 1 0

e	kg	g
	8 9	7 6 8
	-	3 7 7 5 5
	5 2	0 1 3

f	kg	g
	6 8	3 5 8
	-	7 1 0 2
	6 1	2 5 6

2. A box full of books has a mass of 10 kg 950 g. Sami takes out a few books. The box now has a mass of 6 kg 230 g. What is the mass of the books that are taken out of the box?



$$950 \text{ g} - 230 \text{ g} = 720$$

$$10 \text{ kg} - 6 \text{ kg} = 4$$

The mass of the books out of the box is 4 kg 720 g .

kg	g
10	950
6	230
<hr/>	
4	720

3. Ahmed has 55 kg 750 g of potatoes. He uses 23 kg 300 g to make French fries. What is the mass of the potatoes that are left?



The mass of the potatoes left is 32 kg 450 g .

kg	g
55	750
23	300
<hr/>	
32	450

## Exercise 5

1. Add the following. The first one has been solved for you.

a	$\ell$	$m\ell$
1 5	3 4	
+ 3	4 0	
1 8	7 4	

b	$\ell$	$m\ell$
3 7	5 1	
+ 1	2 8	
3 8	7 9	

c	$\ell$	$m\ell$
4 1	2 0 3	
+ 2 5	1 0	
6 6	2 1 3	

d	$\ell$	$m\ell$
3 8	1 6	
+ 2 4	3 5 0	
6 2	3 6 6	

e	$\ell$	$m\ell$
6 3	3 1 7	
+ 1 3	5 6 0	
7 6	8 7 7	

f	$\ell$	$m\ell$
5 3	4 5 4	
+ 2 5	1 0 3	
7 8	5 5 7	

2. A shop sells 14  $\ell$  600  $m\ell$  of cooking oil on Monday. It sells 13  $\ell$  180  $m\ell$  of oil on Tuesday. How much oil does the shop sell on the two days altogether?

600  $m\ell$  + 180  $m\ell$  = 780

14  $\ell$  + 13  $\ell$  = 27



	$\ell$	$m\ell$
	14	600
	13	180
+		
	27	780

The shop sells 27  $\ell$  780  $m\ell$  of oil altogether.

3. Saira makes 25 litres of mango juice. She then makes 12  $\ell$  500  $m\ell$  more of mango juice. How much juice does she make altogether?



	$\ell$	$m\ell$
	25	
	12	500
+		
	37	500

Saira makes 37  $\ell$  500  $m\ell$  of juice.

## Exercise 6

1. Subtract the following. The first one has been solved for you.

a	ℓ	mℓ
1	9	6 4
-	5	2 1
<hr/>		
1	4	4 3

b	ℓ	mℓ
2	9	6 6
-	5	3 2
<hr/>		
2	4	3 4

c	ℓ	mℓ
6	5	1 8 1
-	4	1 3 0
<hr/>		
2	4	1 5 1

d	ℓ	mℓ
4	9	6 8 8
-	2	3 5 2
<hr/>		
2	6	6 3 6

e	ℓ	mℓ
7	5	5 6 8
-	3	0 1 4 2
<hr/>		
4	5	6 3 6

f	ℓ	mℓ
6	8	8 0 6
-	2	6 1 0 6
<hr/>		
4	2	7 0 0

2. There are 84 ℓ 650 mℓ of water in a tank. 23 ℓ 400 mℓ of water is wasted. How much water is left in the tank?

$$650 \text{ mℓ} - 400 \text{ mℓ} = 250$$

$$84 \text{ ℓ} - 23 \text{ ℓ} = 61$$

There is 61 ℓ 250 mℓ of water left in the tank.



	ℓ	mℓ
	84	650
-	23	400
<hr/>		
	61	250

3. The capacity of an oil drum is 87 ℓ 500 mℓ. It is filled to a capacity of 43 ℓ 200 mℓ. What capacity of the drum is left empty?



44 ℓ 300 mℓ of the drum is empty.

	ℓ	mℓ
	87	500
-	43	200
<hr/>		
	44	300

**Unit  
8****Time****Recap Exercise**

1. Look at the clock. Write the correct time in the box.

a



4 o'clock

b



2:30

c



02:15

d



Half past 7

e



05:45

f



10:45



## Exercise 1

1. Add the following.

$$\begin{array}{r} \text{a} \quad 6 \text{ h} \\ + \quad 3 \text{ h} \\ \hline 7 \text{ h} \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 10 \text{ h} \\ + \quad 5 \text{ h} \\ \hline 15 \text{ h} \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 13 \text{ h} \\ + \quad 8 \text{ h} \\ \hline 21 \text{ h} \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 4 \text{ h} \\ + \quad 7 \text{ h} \\ \hline 11 \text{ h} \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 16 \text{ h} \\ + \quad 11 \text{ h} \\ \hline 27 \text{ h} \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 17 \text{ h} \\ + \quad 12 \text{ h} \\ \hline 29 \text{ h} \\ \hline \end{array}$$

2. Saira and her sister watch television for 2 hours. Then they play with their dolls for 3 hours. How much time do the girls spend playing together?



$$2 \text{ hours} + 3 \text{ hours} = 5 \text{ hours}$$

The girls spend 5 hours playing together.

$$\begin{array}{r} 2 \text{ h} \\ + \quad 3 \text{ h} \\ \hline 5 \text{ h} \\ \hline \end{array}$$

3. Ali's mother spends 4 hours in washing clothes and 3 hours in cleaning the house. How much time does she spend altogether?



$$4 \text{ hours} + 3 \text{ hours} = 7 \text{ hours}$$

$$\begin{array}{r} 4 \text{ h} \\ + 3 \text{ h} \\ \hline 7 \text{ h} \end{array}$$

Ali's mother spends 7 hours altogether.

4. A train takes 18 hours to travel from Karachi to Lahore. It takes 4 hours to travel from Lahore to Islamabad. How long is the whole journey?



$$18 \text{ hours} + 4 \text{ hours} = 22 \text{ hours}$$

$$\begin{array}{r} 18 \text{ h} \\ + 4 \text{ h} \\ \hline 22 \text{ h} \end{array}$$

The whole journey is 22 hours long.

## Exercise 2

1. Subtract the following.

$$\begin{array}{r} \text{a} \quad 7 \text{ h} \\ - 3 \text{ h} \\ \hline 4 \text{ h} \end{array}$$

$$\begin{array}{r} \text{b} \quad 10 \text{ h} \\ - 6 \text{ h} \\ \hline 4 \text{ h} \end{array}$$

$$\begin{array}{r} \text{c} \quad 14 \text{ h} \\ - 5 \text{ h} \\ \hline 9 \text{ h} \end{array}$$

$$\begin{array}{r} \text{d} \quad 9 \text{ h} \\ - 4 \text{ h} \\ \hline 5 \text{ h} \end{array}$$

$$\begin{array}{r} \text{e} \quad 16 \text{ h} \\ - 11 \text{ h} \\ \hline 5 \text{ h} \end{array}$$

$$\begin{array}{r} \text{f} \quad 18 \text{ h} \\ - 9 \text{ h} \\ \hline 9 \text{ h} \end{array}$$

2. Arham plays football for 6 hours. Then he reads a book for 2 hours. How much more time does he spend playing than reading?



$$6 \text{ hours} - 2 \text{ hours} = 4 \text{ hours}$$

Arham spends 4 hours more playing than reading.

$$\begin{array}{r} 6 \text{ h} \\ - 2 \text{ h} \\ \hline 4 \text{ h} \end{array}$$

3. Mrs Umair sews a shirt in 4 hours. She sews a trouser in 9 hours. How much less time it takes for her to sew a shirt than a trouser?



$$9 \text{ hours} - 4 \text{ hours} = 5 \text{ hours}$$

Mrs Umair takes 5 hours less to sew a shirt.

$$\begin{array}{r} 9 \text{ h} \\ - 4 \text{ h} \\ \hline 5 \text{ h} \end{array}$$

4. Sami takes 12 hours to build a room. Arshad takes 9 hours to build the same room. How much more time does Sami take than Arshad to build the room?



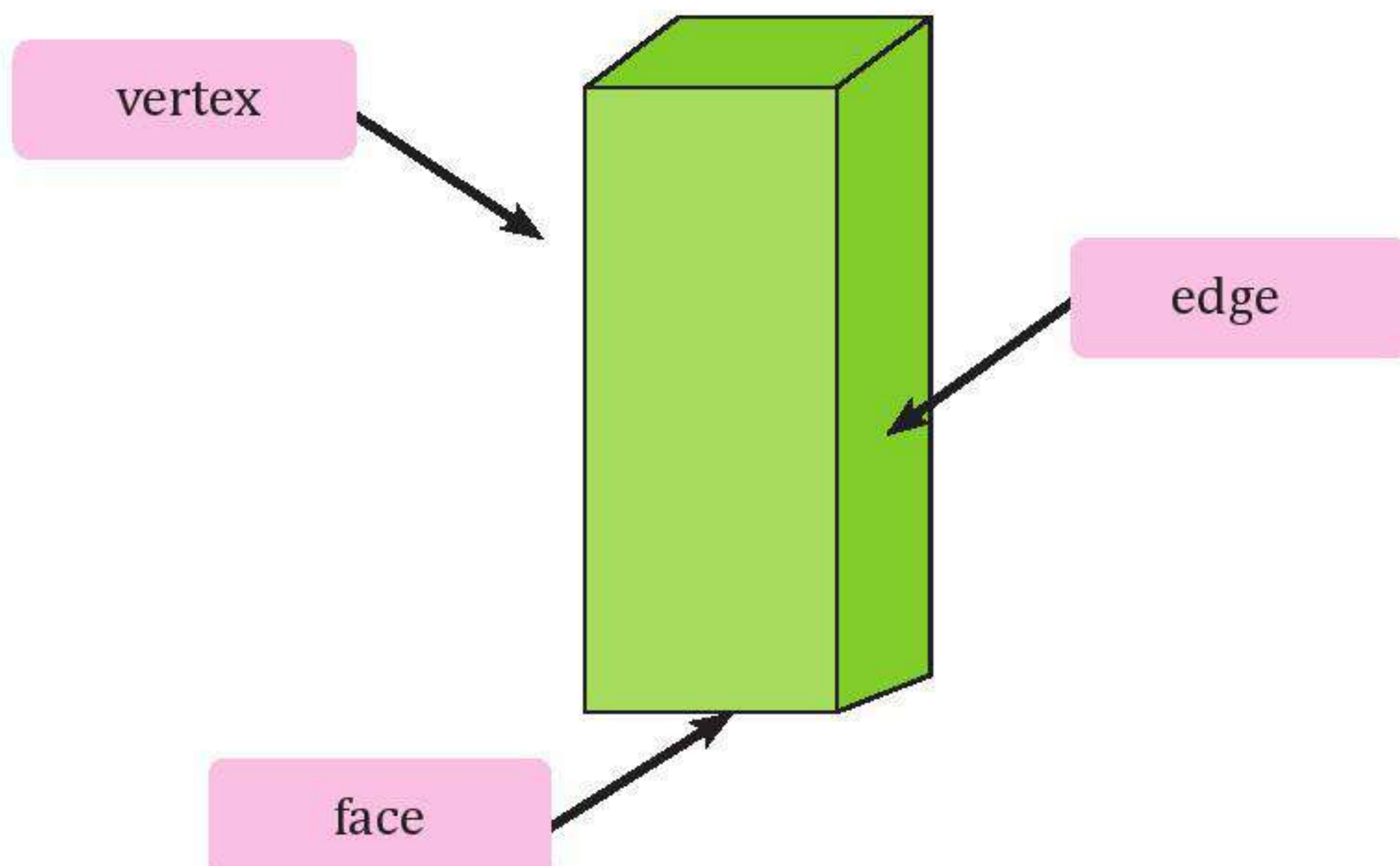
$$12 \text{ hours} - 9 \text{ hours} = 3 \text{ hours}$$

Sami takes 3 hours more to build the room.

$$\begin{array}{r} 12 \text{ h} \\ - 9 \text{ h} \\ \hline 3 \text{ h} \end{array}$$

**Unit  
9****Geometry****Recap Exercise****1. What shape am I?**

- a) I have three sides. I am a **Triangle**
- b) All my four sides are equal. I am a **Square**
- c) I look just like a ball. I am a **Sphere / circle**
- d) I have one curved sides and two flat sides that are circles. I am a **Cylinder**
- e) I have 6 faces and 6 edges but I am not a cube. I am a **Cuboid**
- f) I am half a circle. I am a **Semi-circle**

**2. Label the figure using the words given below.**

3. Match the shapes to their names.

a) cube



b) cuboid



c) cylinder



d) sphere

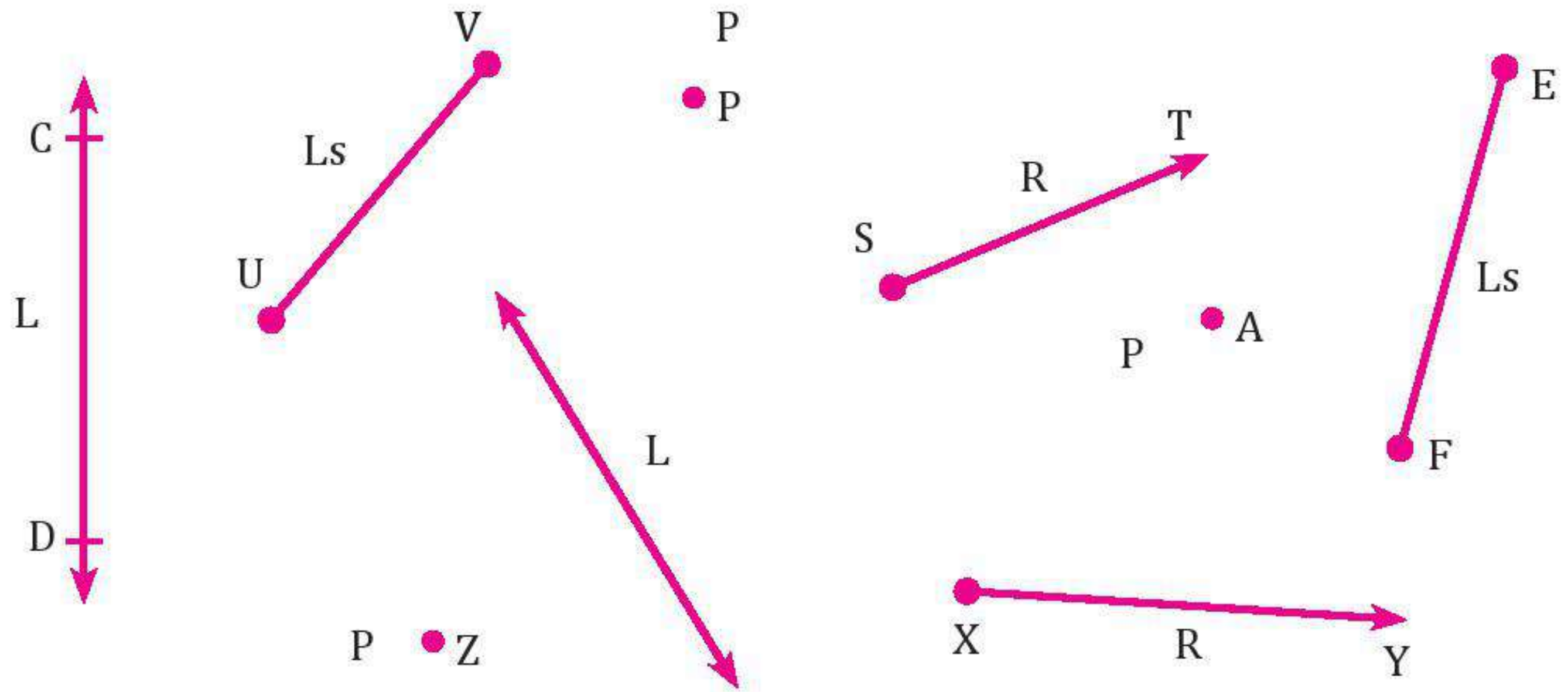


e) cone



### Exercise 1

1. Look at the figure in the box. Identify and mark points (P), rays (R), Line (L) and line segments (Ls). Label them with the letters appropriately.



2. Measure the following line segments.



5 cm



9 cm



8 cm



12 cm

**3. Draw the following line segments.**

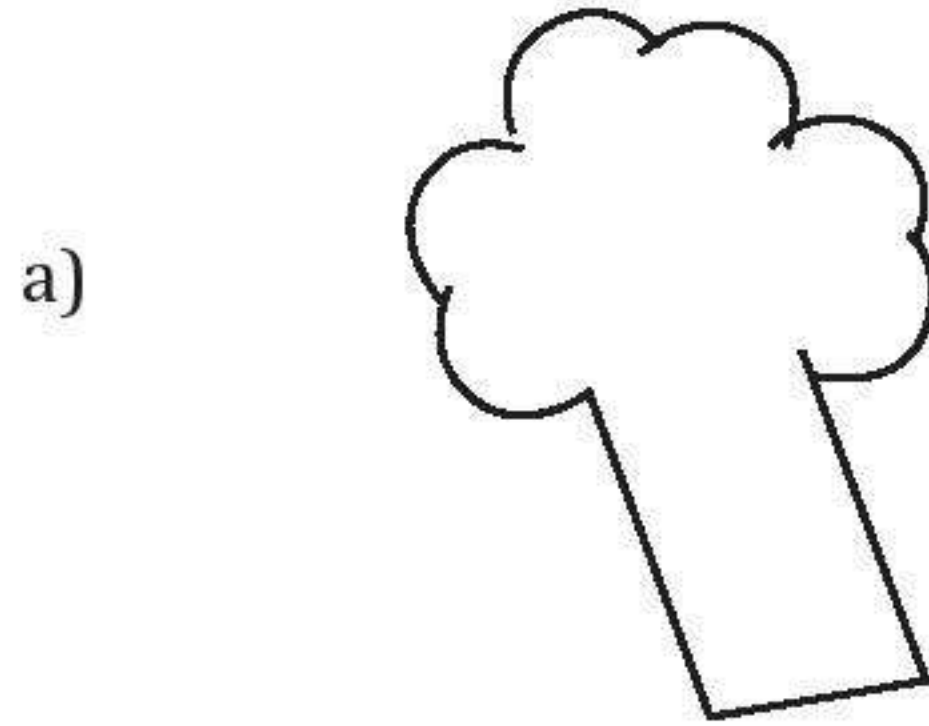
a)  $AB = 4\text{ cm}$

b)  $XY = 10\text{ cm}$

c)  $CD = 13\text{ cm}$

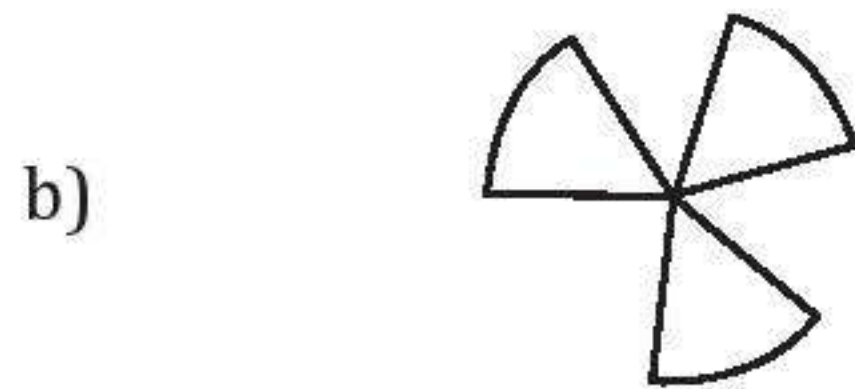
d)  $OP = 7\text{ cm}$

**4. How many straight lines and curves are there in each of these figures?**



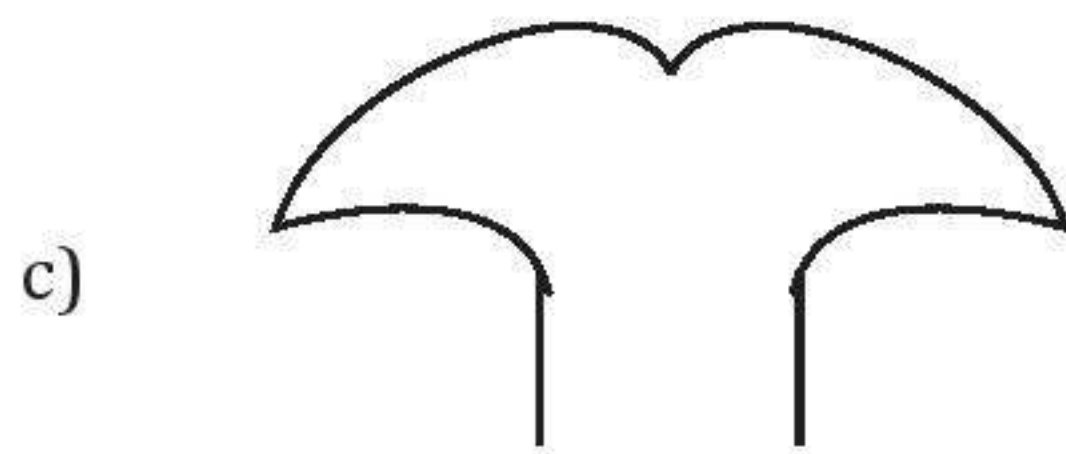
3 straight lines

6 curves



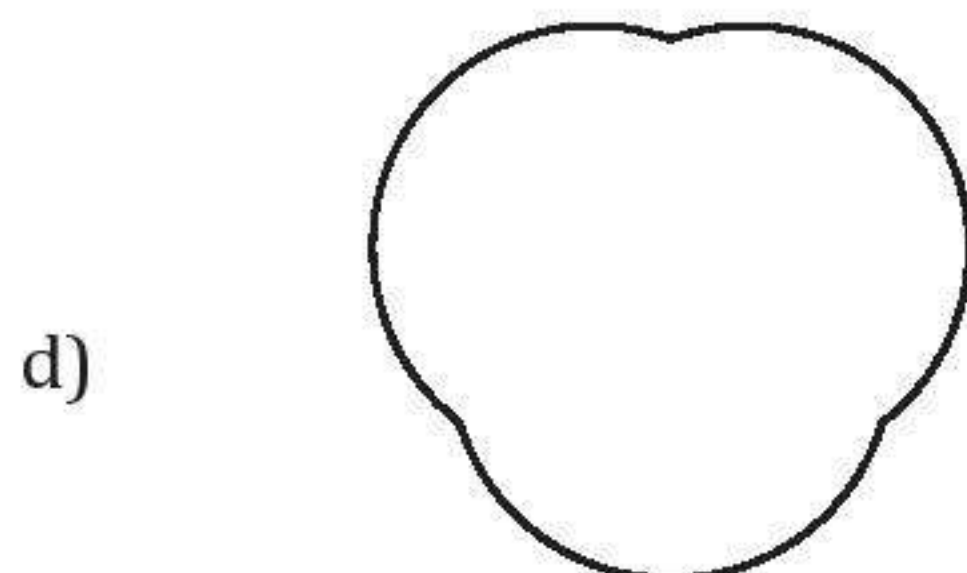
6 straight lines

3 curves



2 straight lines

4 curves



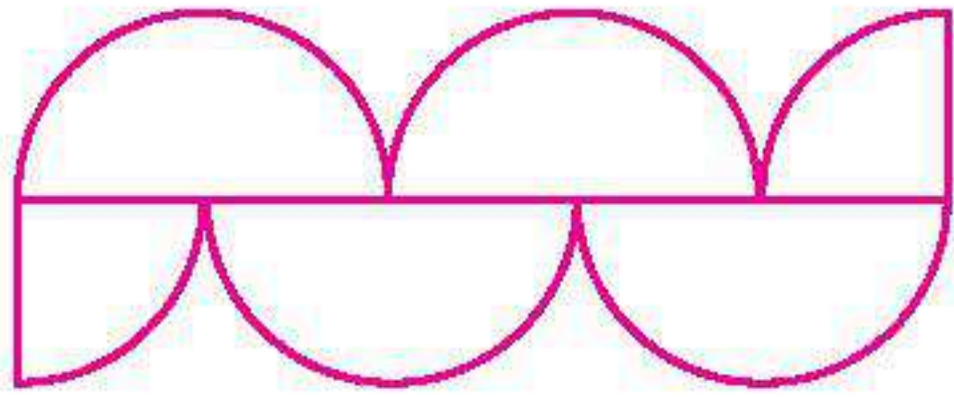
0 straight lines

3 curves



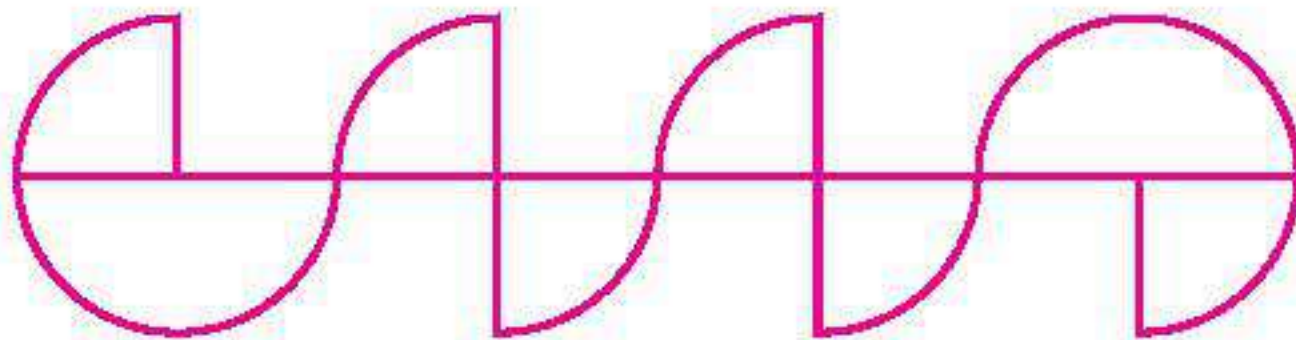
## Exercise 2

1. How many semicircles can you see in this figure?



4 semicircles

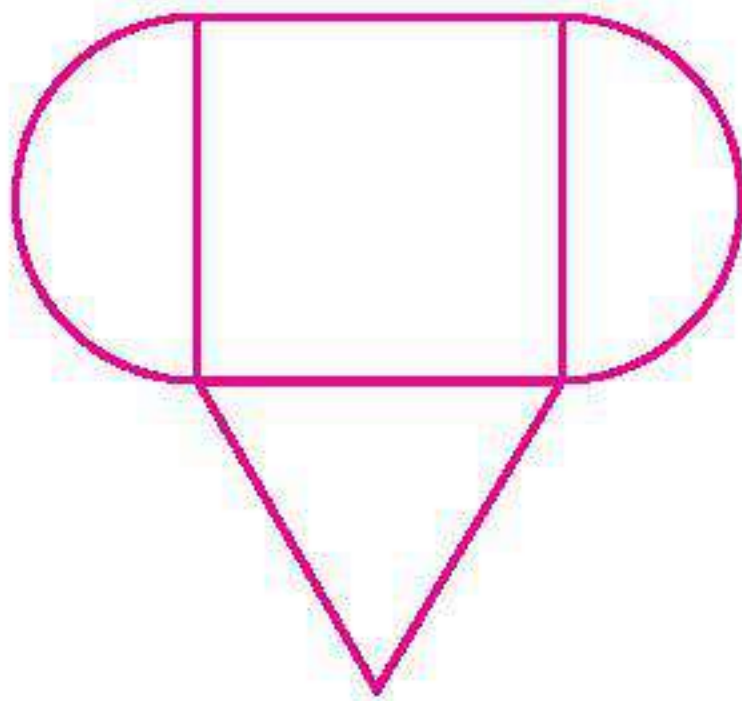
2. How many quarter circles can you see in this figure?



6 quarter circles

3. Name the shapes in each given figure.

a)

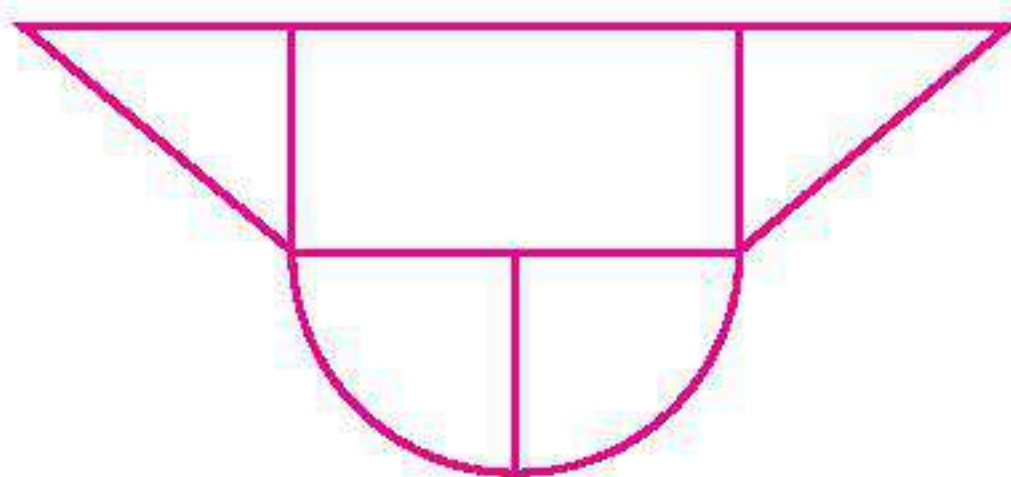


Square

Semi-circle

Triangle

b)



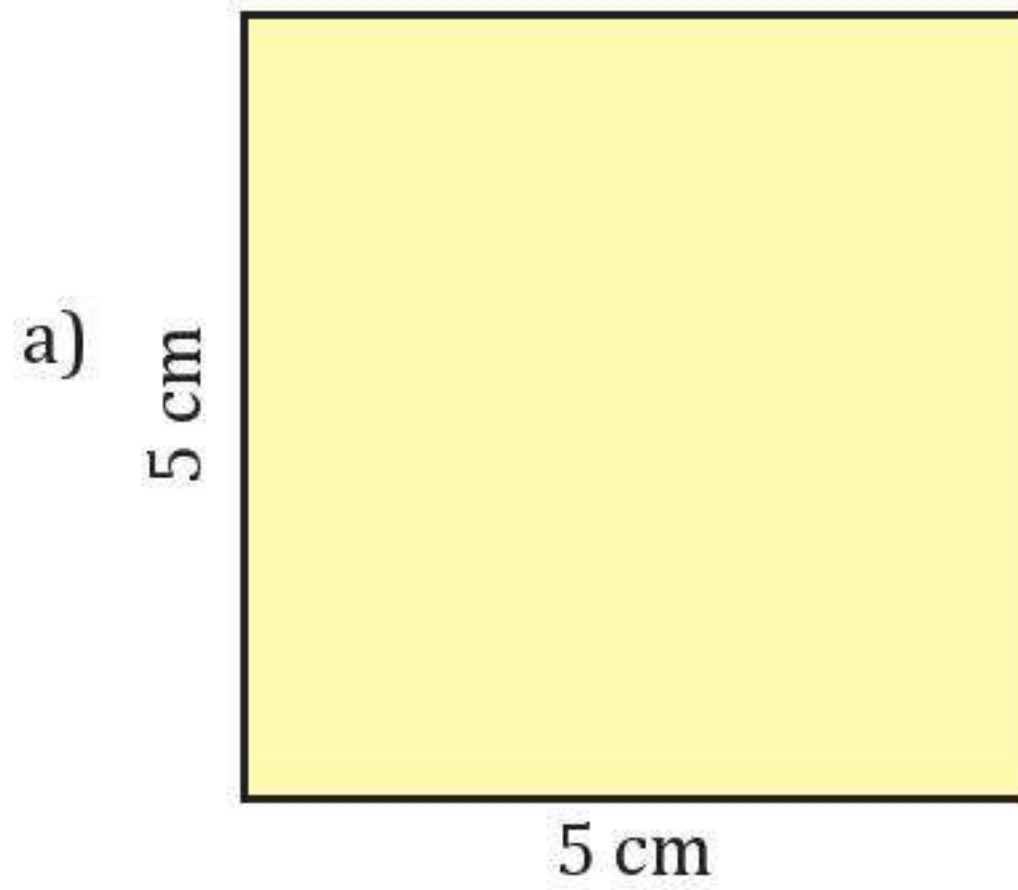
Rectangle

Triangle

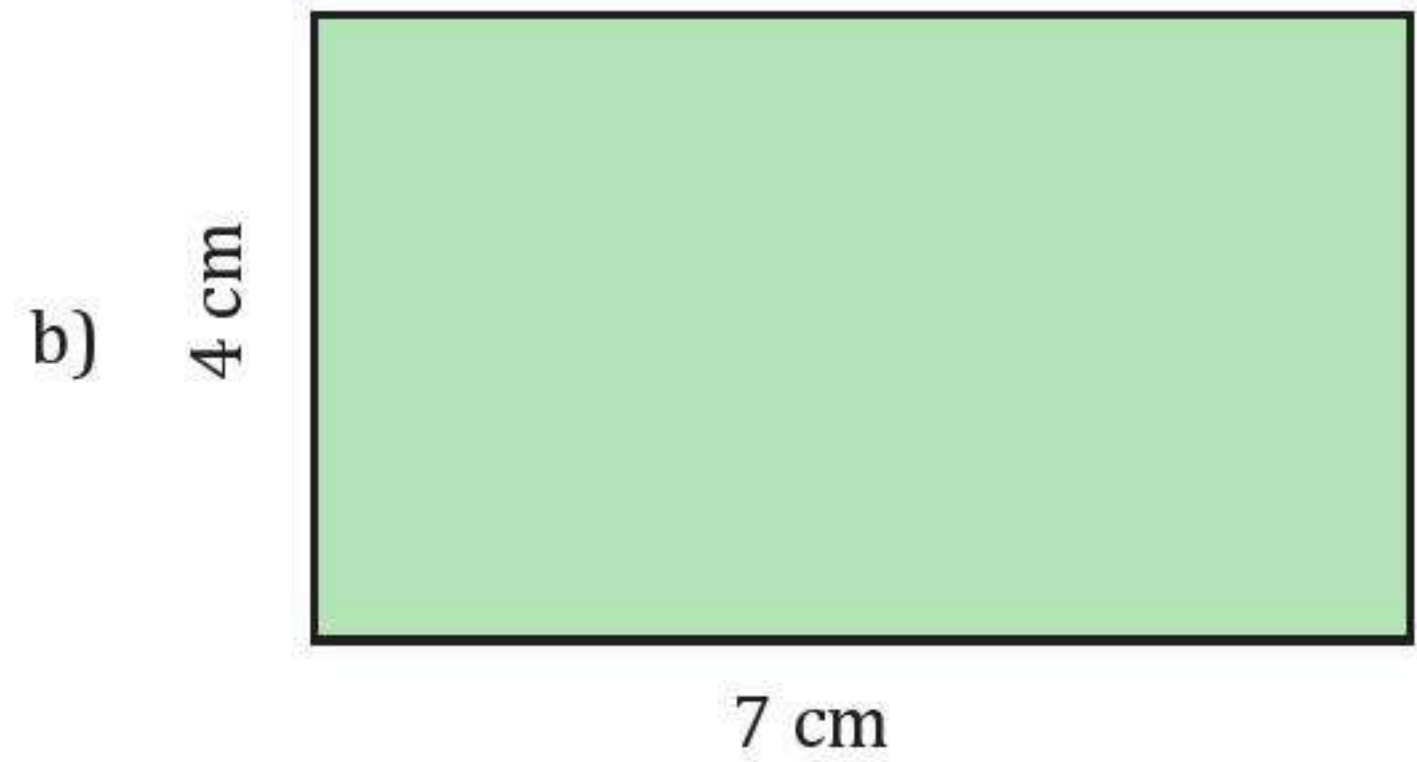
Semi-circle

## Exercise 3

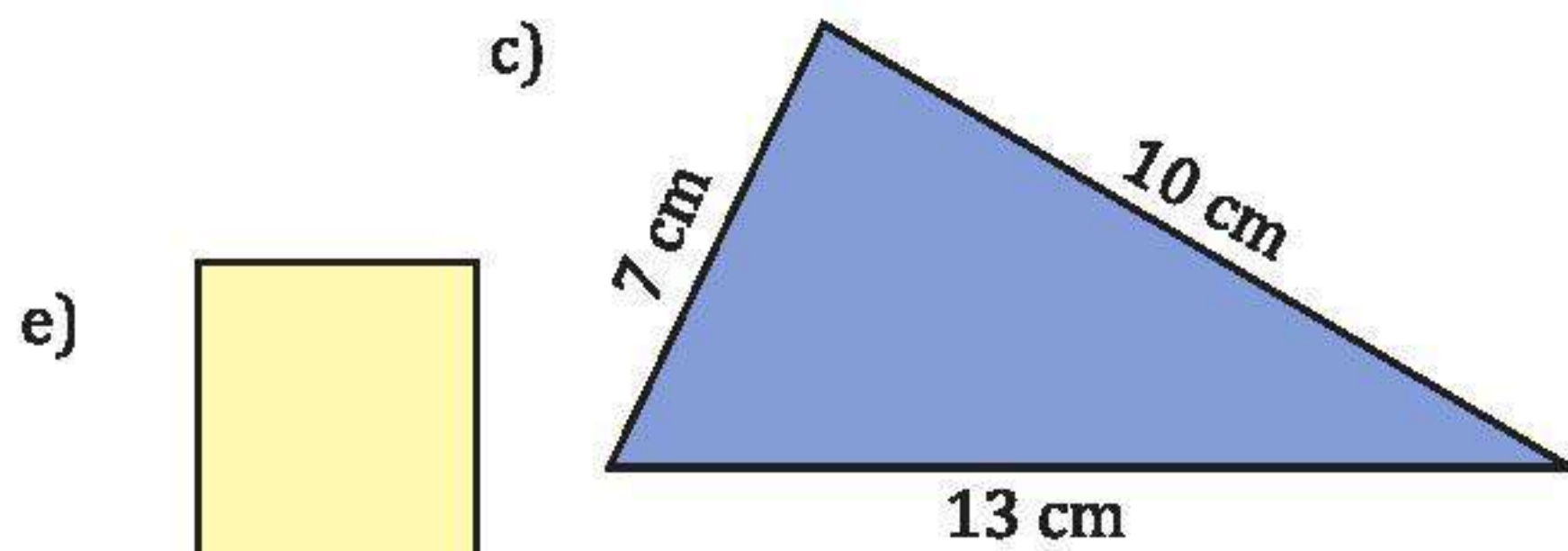
1. Find the perimeter of each given shape.



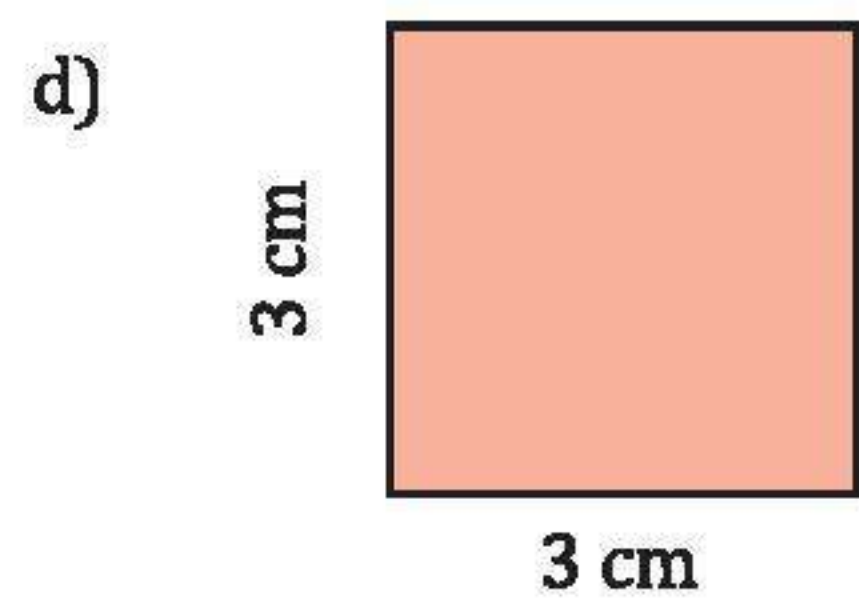
Perimeter = 20 cm



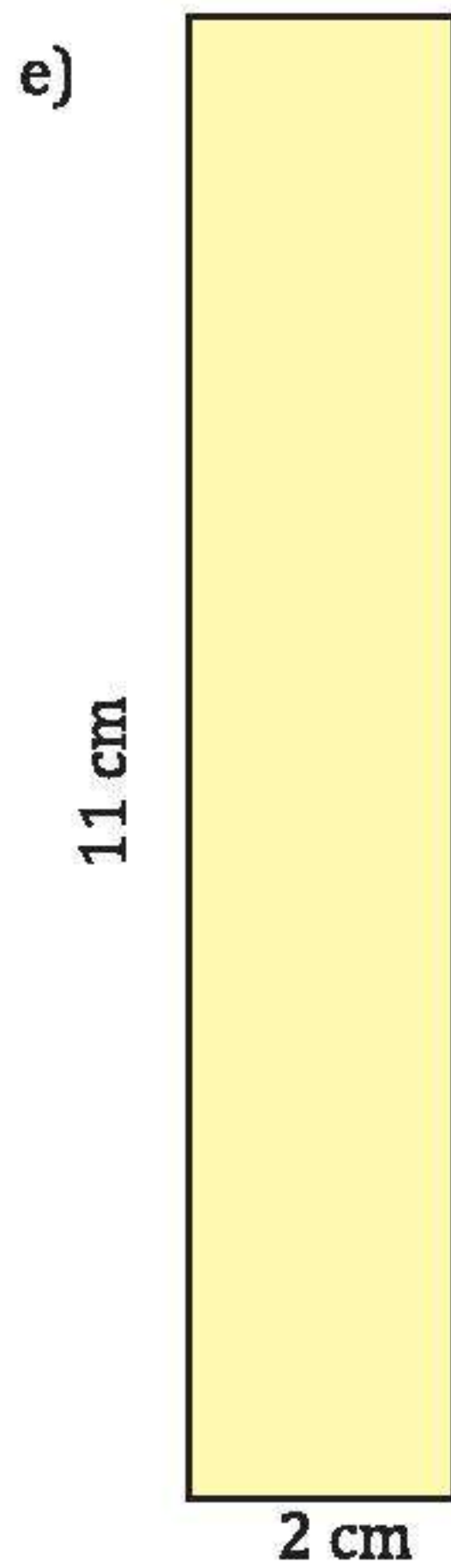
Perimeter = 22 cm



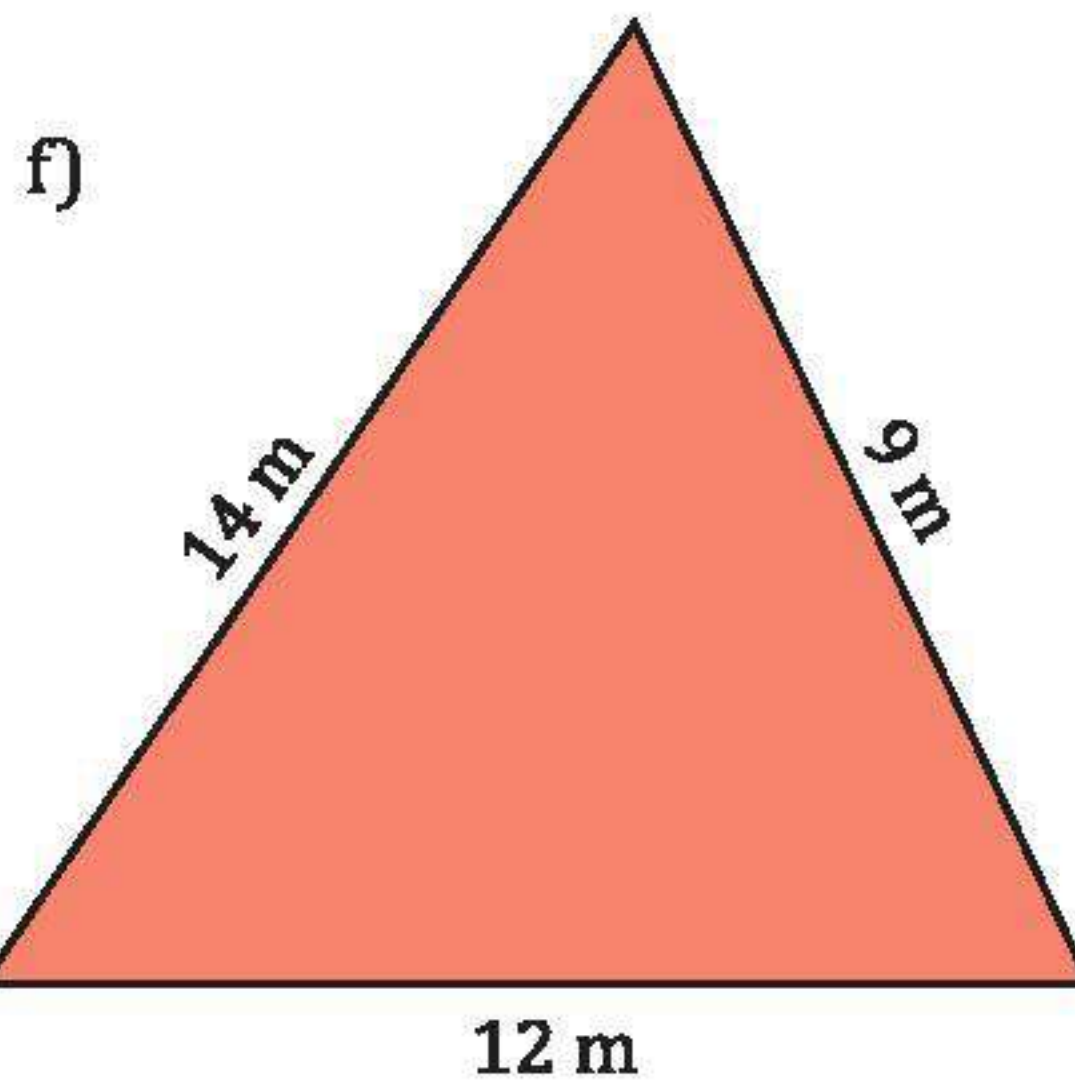
Perimeter = 30 cm



Perimeter = 12 cm



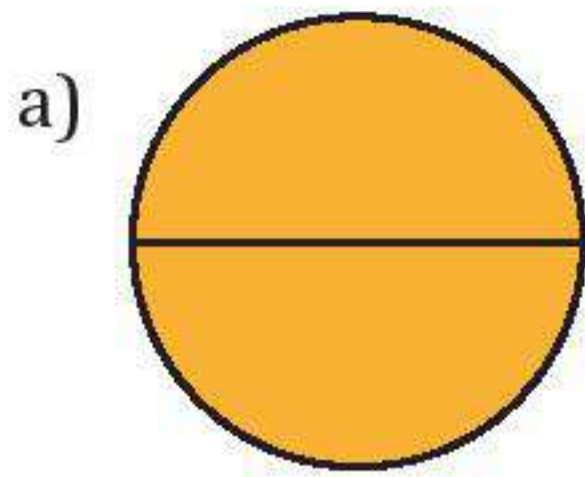
Perimeter = 26 cm



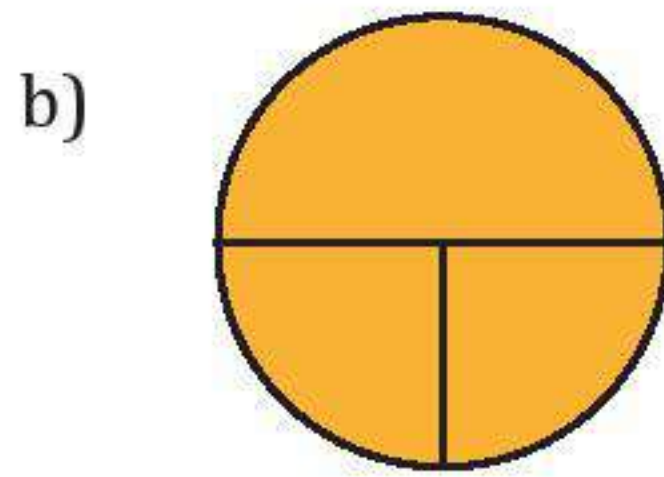
Perimeter = 35 cm

## Exercise 4

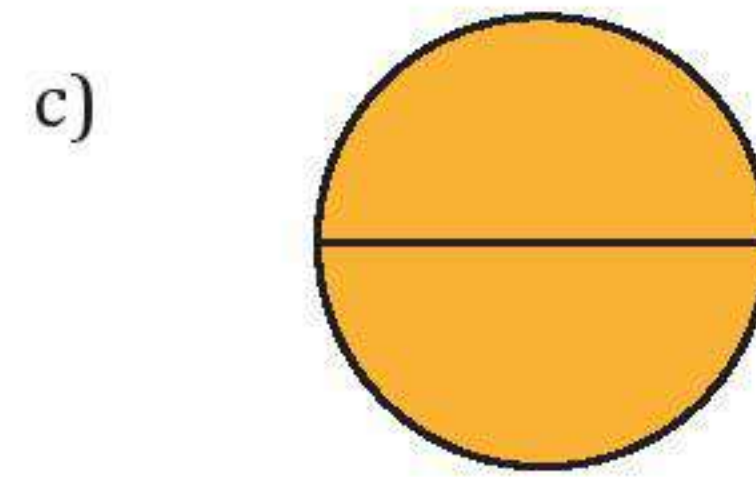
1. Draw the given parts in each figure.



A centre

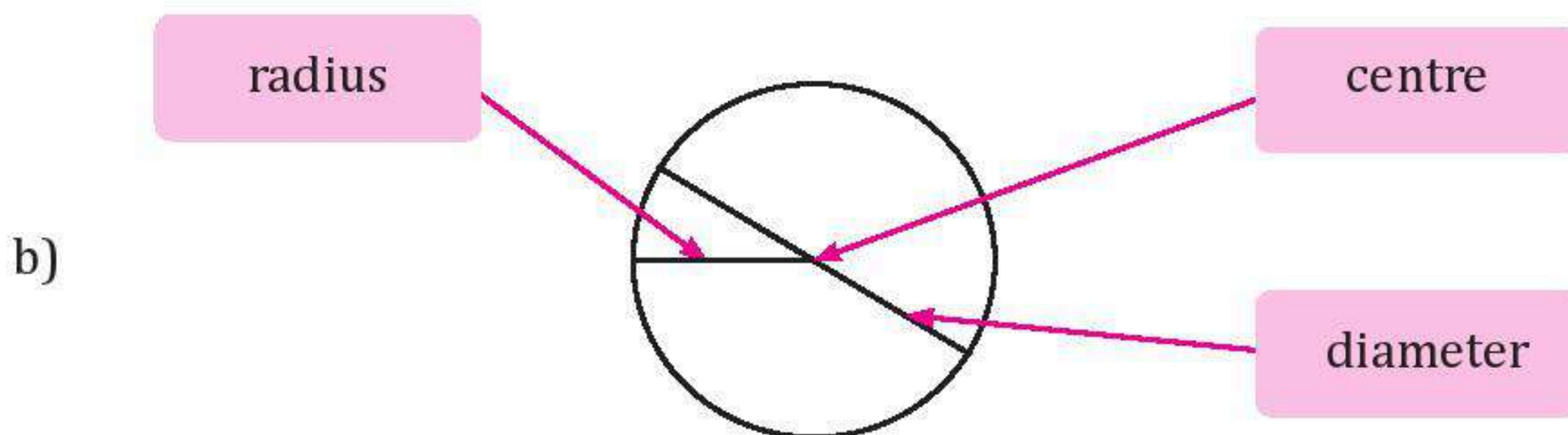
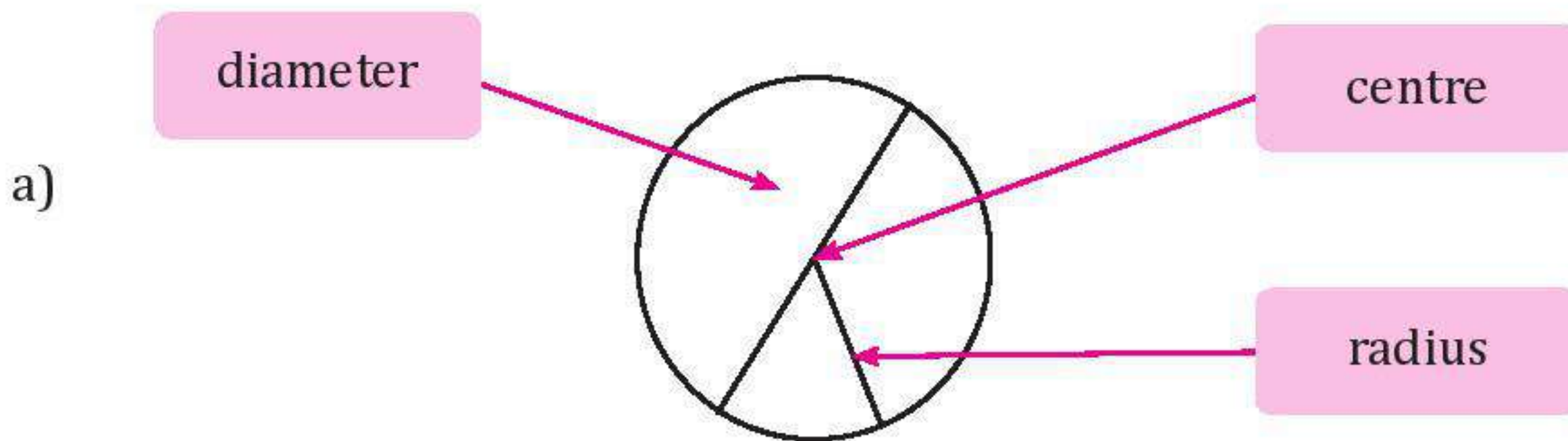


A radius



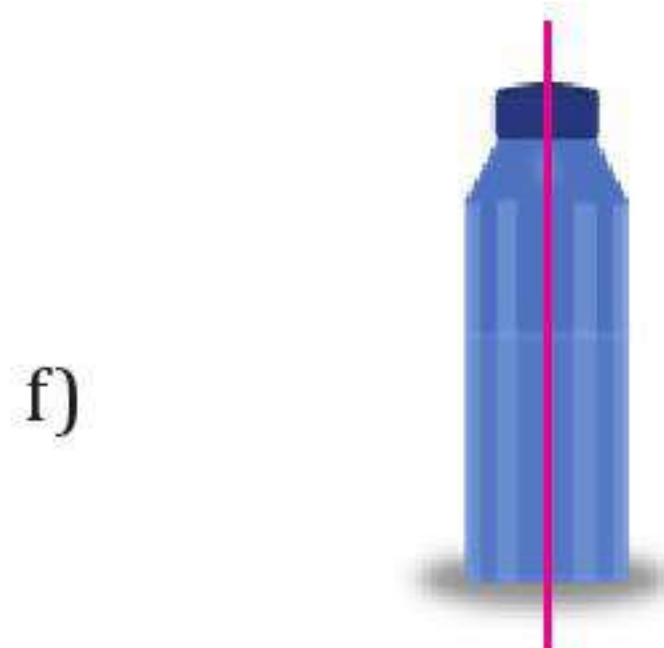
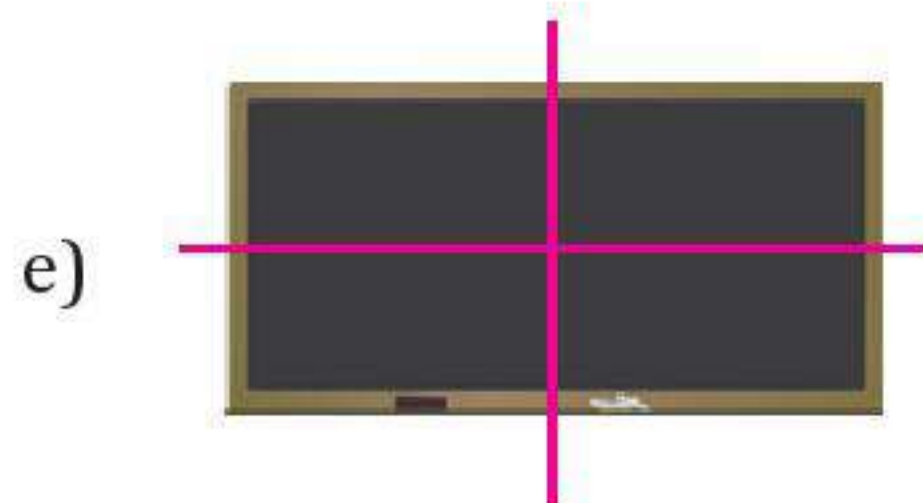
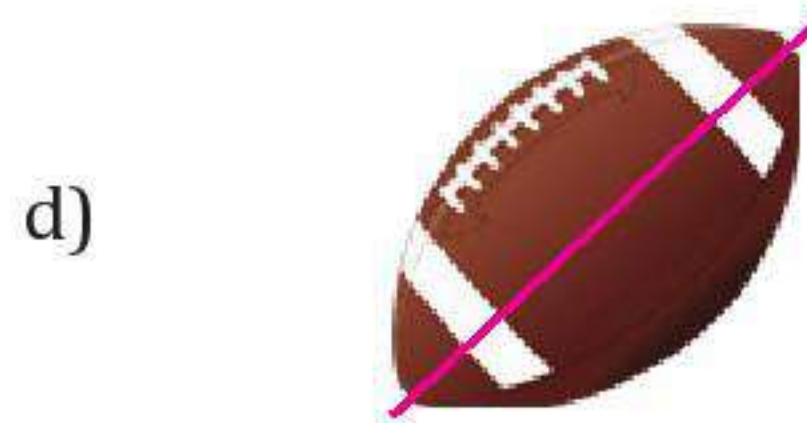
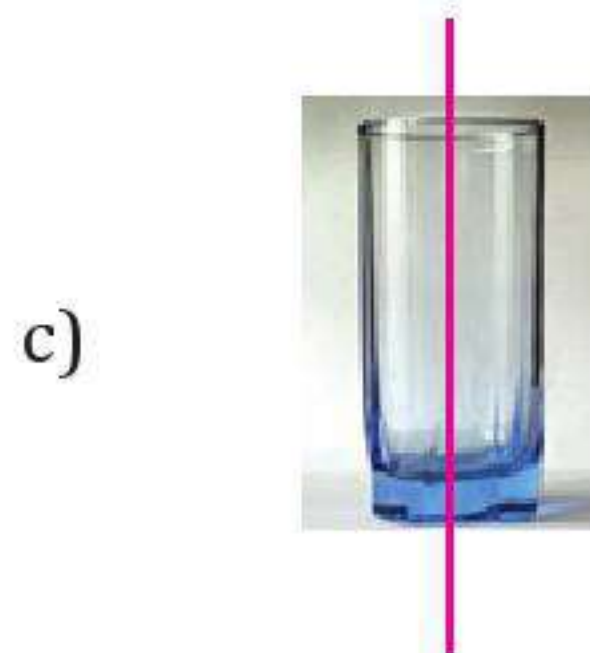
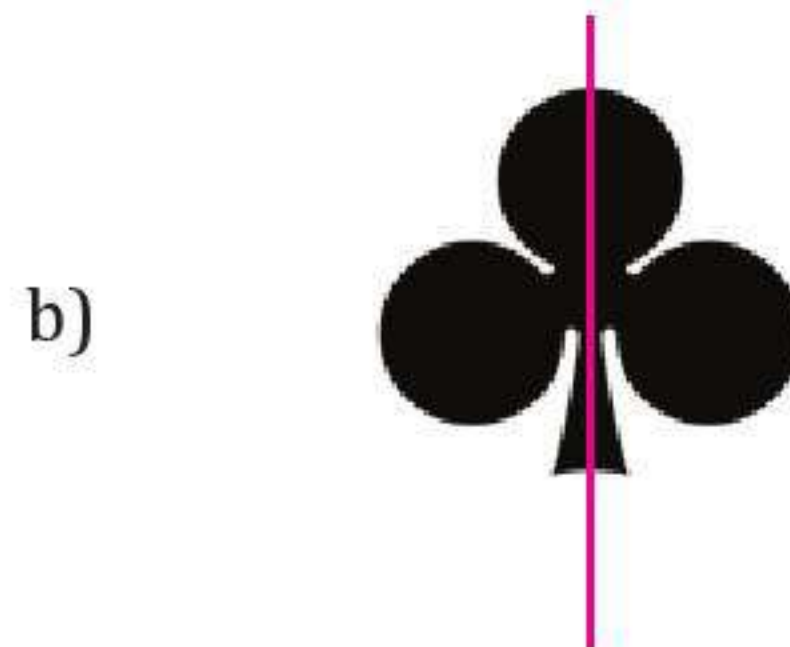
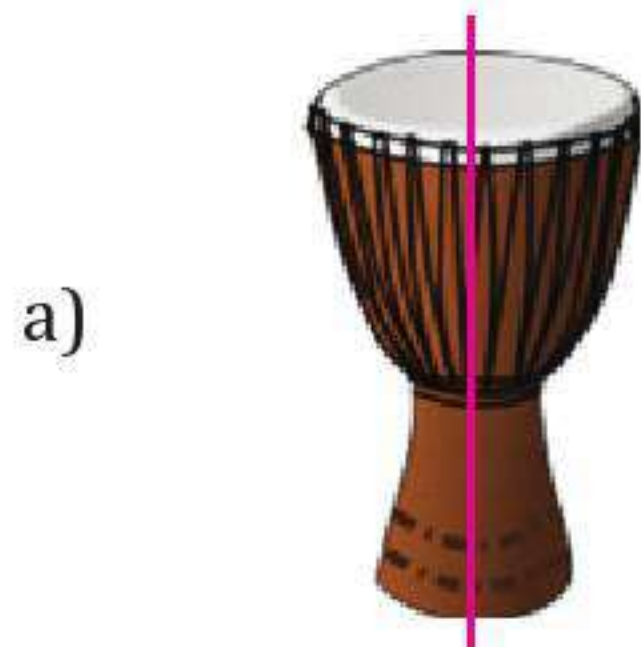
A diameter

2. Identify the diameter, radius and centre in each figure.



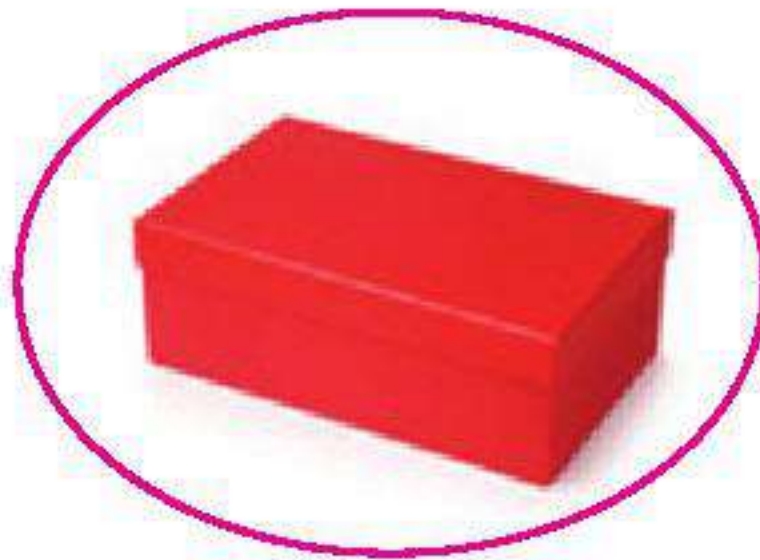
### Exercise 5

1. Draw lines of symmetry in each figure. Some figures may have more than one line of symmetry.



### Exercise 6

1. Encircle the shape that has only flat faces.

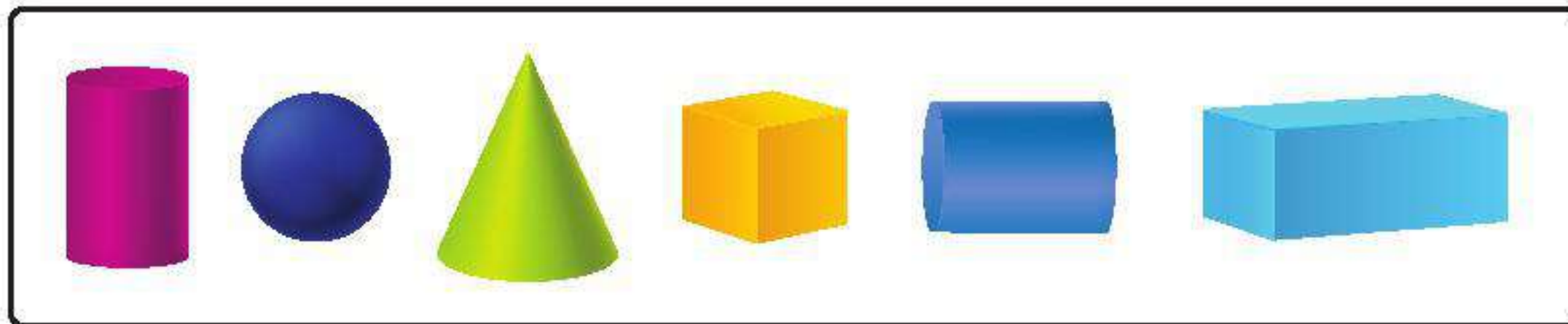


**Unit  
10**

**Graphs**

**Exercise 1**

1. Sort the items in the Carroll diagram.



3-D shapes	With vertex	Without vertex
Can roll	cylinder, cube	sphere
Cannot roll	cuboid	cone

2. Complete the Carroll diagram given below.

39    25    12    18    30    45    23    60    39    40    59    5

	Even numbers	Odd numbers
Numbers in the Table of 5	30, 60, 40, 60	5, 25, 45
Numbers not in the Table of 5	12, 18	39, 23, 59

3. The tally chart below shows the number of animals at a zoo.



Type of Animal	Tally marks	Number of animals
Monkey		16
Zebra		5
Giraffe		6
Lion		7
Bear		4

Now answer the questions below.

- How many lions are there in the zoo?
- How many zebras are there in the zoo?
- Which animal is the greatest in number?
- How many more monkeys than lions are in the zoo?
- How many animals are there in the zoo altogether?

7

5

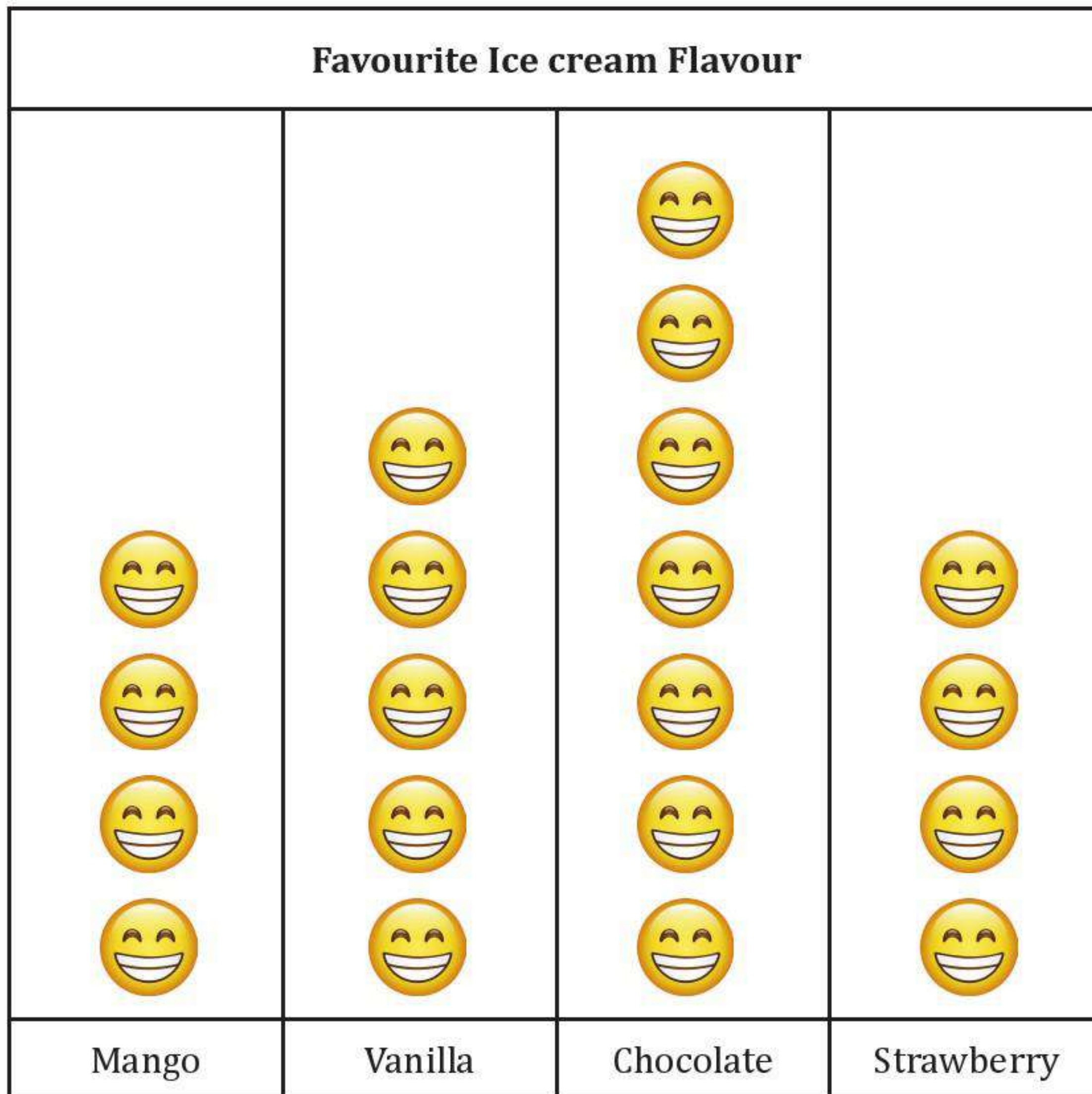
Monkey


9

38

## Exercise 2

1. The picture graph shows the favourite ice cream flavour of a group of children.

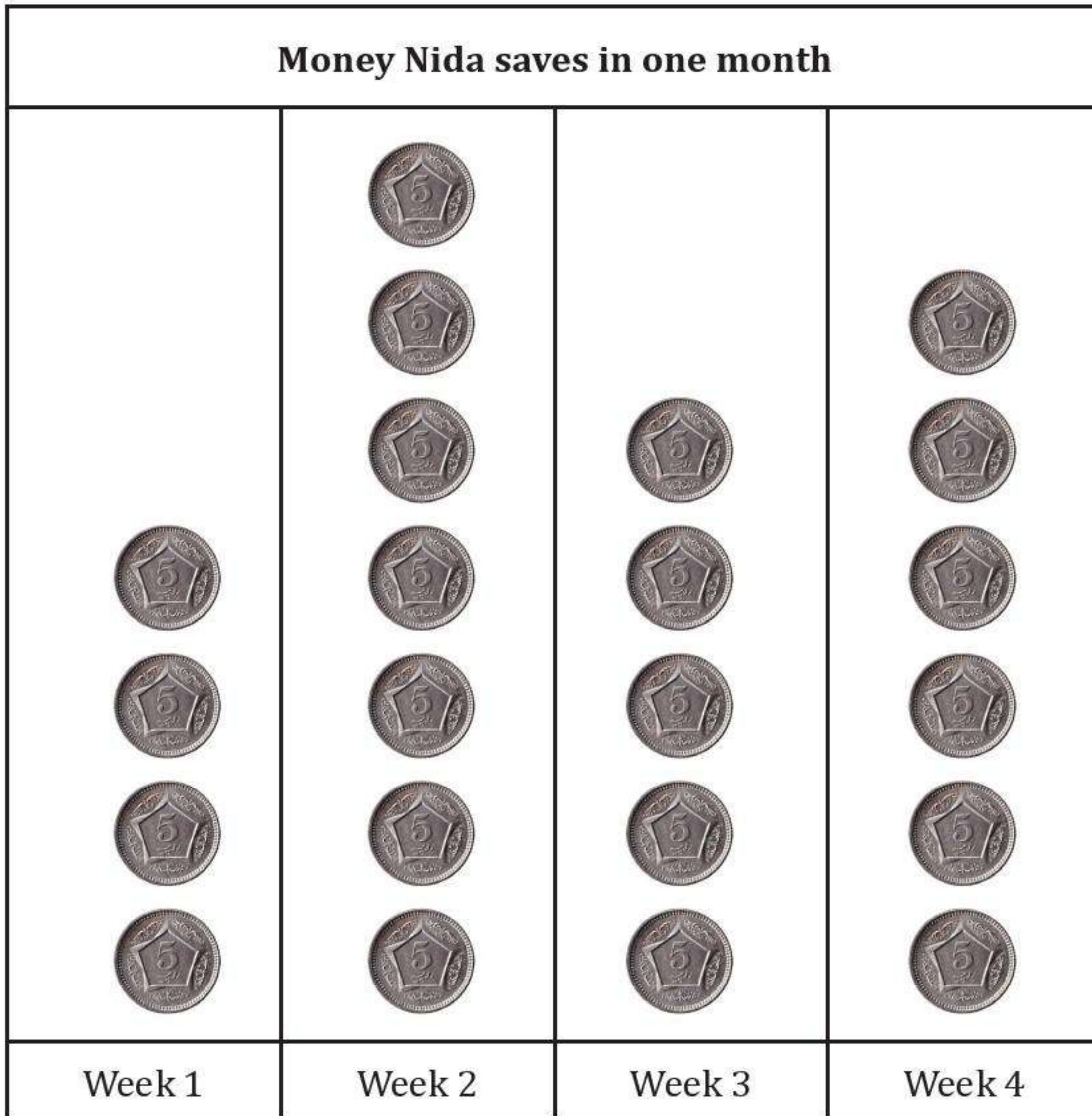


Each  stands for 1 child.

- a) Which is the most favourite ice cream flavour? **Chocolate**
- b) How many children like vanilla flavoured ice cream? **5**
- c) Which two flavours have the same number of likes? **Strawberry** and **Mango**
- d) How many less children like mango than chocolate flavoured ice cream? **3**



2. The picture graph shows how much money Nida saves in one month.



a) How much does Nida save in Week 1?

$$\text{Rs } 5 + \text{Rs } 5 + \text{Rs } 5 + \text{Rs } 5 = \text{Rs } 20$$

Nida saves Rs 20 in Week 1.

b) In which week does she save the most?

week 2

c) How much more does she save in Week 2 than in Week 4?

5