Rosary School \ Marj Elhamam

Name : …… Date : / 9 / 2025

Subject: Worksheet (1) / unit (1) Grade : 6 ( )

Analysing and displaying data

Q1. Find the **mode** of each set of data:

a) 2, 5, 6, 5, 8, 5, 7 mode= _____

b) 9, 3, 6, 9, 2, 6 mode= _____

c) 1, 2, 3, 4, 5 mode= _____

d) 11, 15, 11, 20, 22, 20 mode= _____

e) 8, 9, 8, 7, 9, 10, 8 mode= _____

Q2. Salim did a survey of favorite colors, the results are shown in the following frequency table.

Color	Frequency
Red	10 students
Blue	12 students
Green	7students
Yellow	12 students

What is the **mode** color?_____

Q3. A shopkeeper records the number of ice creams sold each day:

12, 15, 18, 15, 20, 18, 15

Find the **mode**. _____

Q4. A dice was rolled 12 times, and these numbers came up:

2, 5, 3, 2, 4, 5, 6, 2, 1, 5, 2, 3

Which number is the **mode**? _____

Q5. Find the **median** of each set of data:

a) 3, 7, 9, 11, 13 median= _____

b) 18, 25, 22, 20, 19 median= _____

c) 12, 15, 18, 21, 24 median= _____

d) 5, 10, 15, 20, 25, 30 median= _____

e) 2, 4, 6, 8, 10, 12, 14 median= _____

f) 1, 3, 5, 7, 9, 11, 13, 15 median= _____

Q6. The ages of 7 cousins are:

5, 8, 10, 6, 12, 7, 9

What is the **median** age?_____

Q7. Five students got these marks in a spelling test:

18, 25, 22, 20, 19

What is the **median** score? _____

Q8. Find the **mean** of each set of data:

a) 6, 8, 10, 12, 14 mean= _____

b) 5, 7, 9, 11 mean= _____

c) 5, 10, 15, 20, 25 mean= _____

d) 3, 6, 9, 12, 15 mean= _____

e) 2, 4, 6, 8, 10, 12 mean= _____

Q9. A shopkeeper counted the apples in 4 baskets, here are the results:

15, 20, 22, 18

What is the **mean** of apples in a basket?

mean= _____

Q10. Find the **range** of each set of data:

a) 3, 7, 9, 12, 15 Range=_____

b) 10, 20, 25, 30, 40 Range=_____

c) 5, 8, 12, 6, 10 Range=_____

Q11. Ali recorded the number of pages he read in 5 days:

3, 7, 9, 12, 15 pages.

What is the **range** of pages Ali read? _____

Q12. Which of these are **discrete** and which are **continuous**?

a) Number of pencils in your bag. _____

b) Height of your teacher. _____

c) Number of goals scored in a match. _____

d) Time taken to run a race. _____

Q13. The scores of 20 students in a spelling quiz are:

5, 6, 7, 5, 8, 6, 7, 5, 9, 6, 8, 7, 6, 5, 7, 8, 9, 6, 7, 5

a) Complete the frequency table below:

Score	Tally	Frequency
5		
6		
7		
8		
9		

b)What is the **mode**? _____

Q14. The ages of 30 students in a club are:

10, 11, 10, 12, 13, 11, 14, 12, 10, 13, 12, 11, 10, 14, 13, 12, 11, 10, 15, 12, 13, 11, 12, 14, 13, 12, 11, 10, 13, 12

Complete the grouped frequency table below.

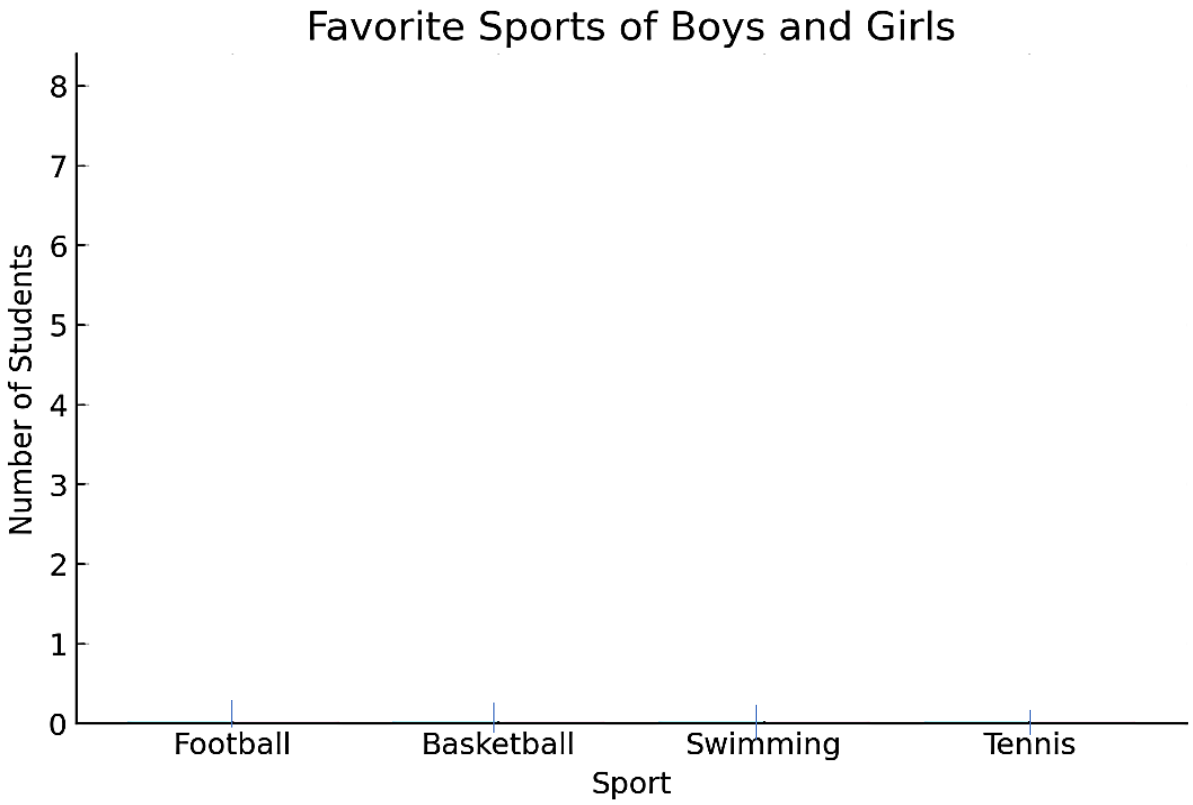
Age (years)	Tally	Frequency
10–11		
12–13		
14–15		

Q15. A survey was conducted to find out the **favorite sports of boys and girls** in a class.

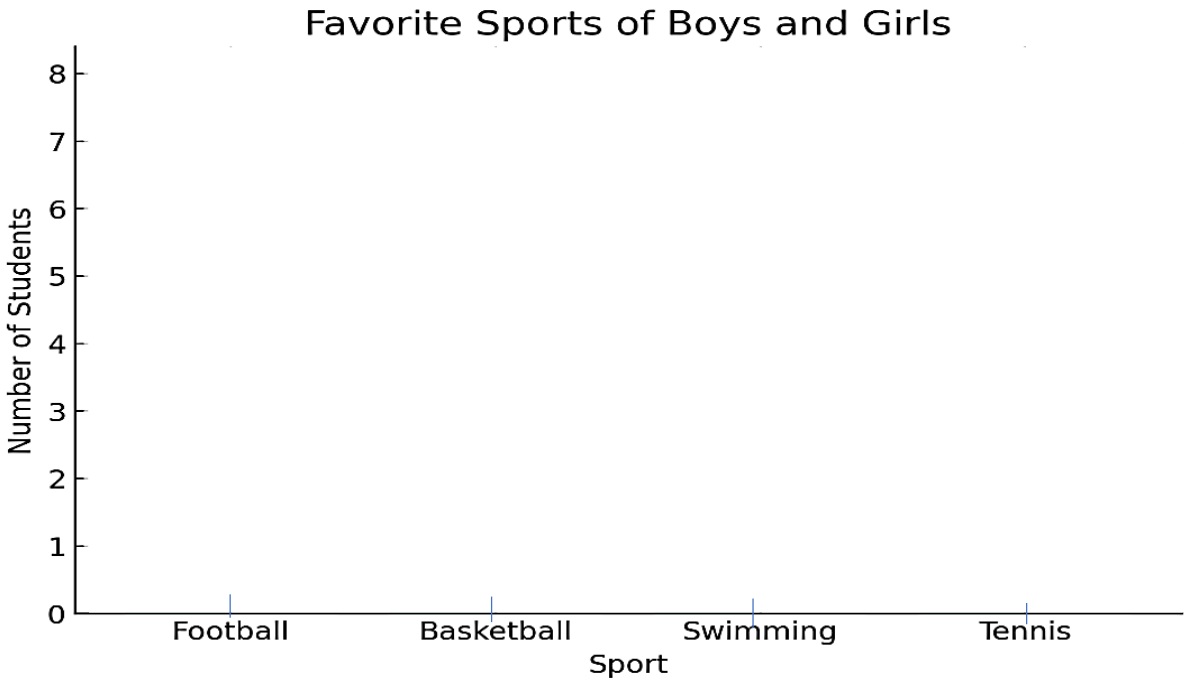
The data collected is shown by the following table:

Sport	Boys	Girls
Football	8	2
Basketball	5	3
Swimming	3	6
Tennis	2	4

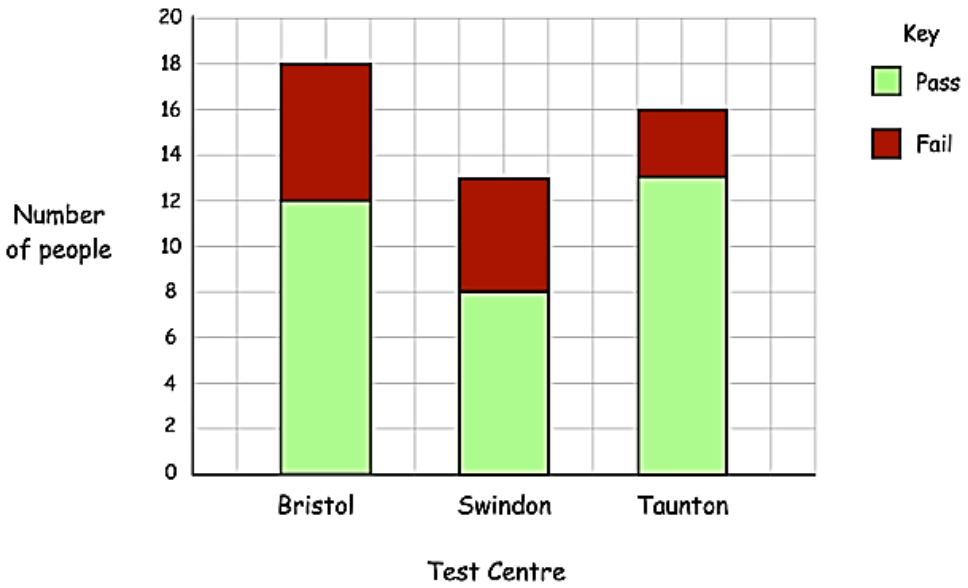
a) Draw a dual bar chart to represent the data.



b) Draw a compound bar chart to represent the data.



Q16. The composite bar chart shows the results of driving tests one morning in three different test centers.



a) How many people passed their driving test at the Bristol test centre?

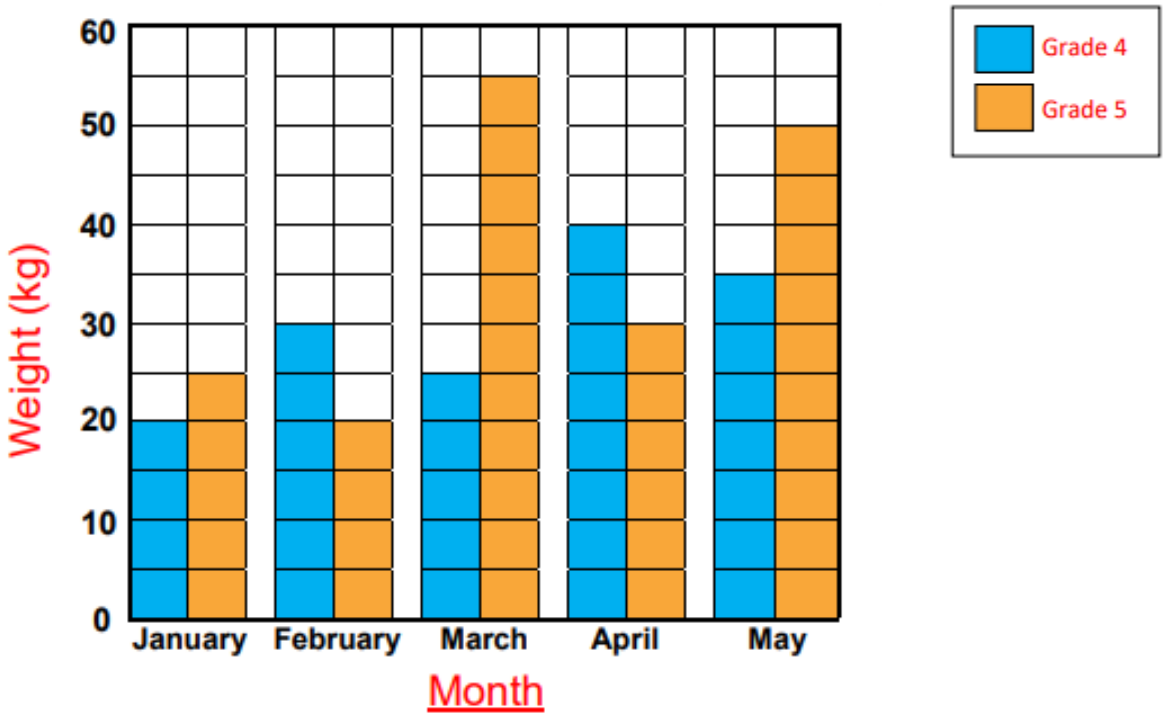
_____

b) How many people failed their driving test at the Taunton test centre?

_____

c) How many people tested at Swindon test centre ? _____

Q16. Students collected and recorded the weight of old newspapers for 5 months.



a) In which month did grade 4 pupils collect the most newspapers?

_____

b) In which month did grade 5 pupils collect the fewest newspapers?

_____

c) How many kg of newspapers did the Grade 5 students collect?

_____

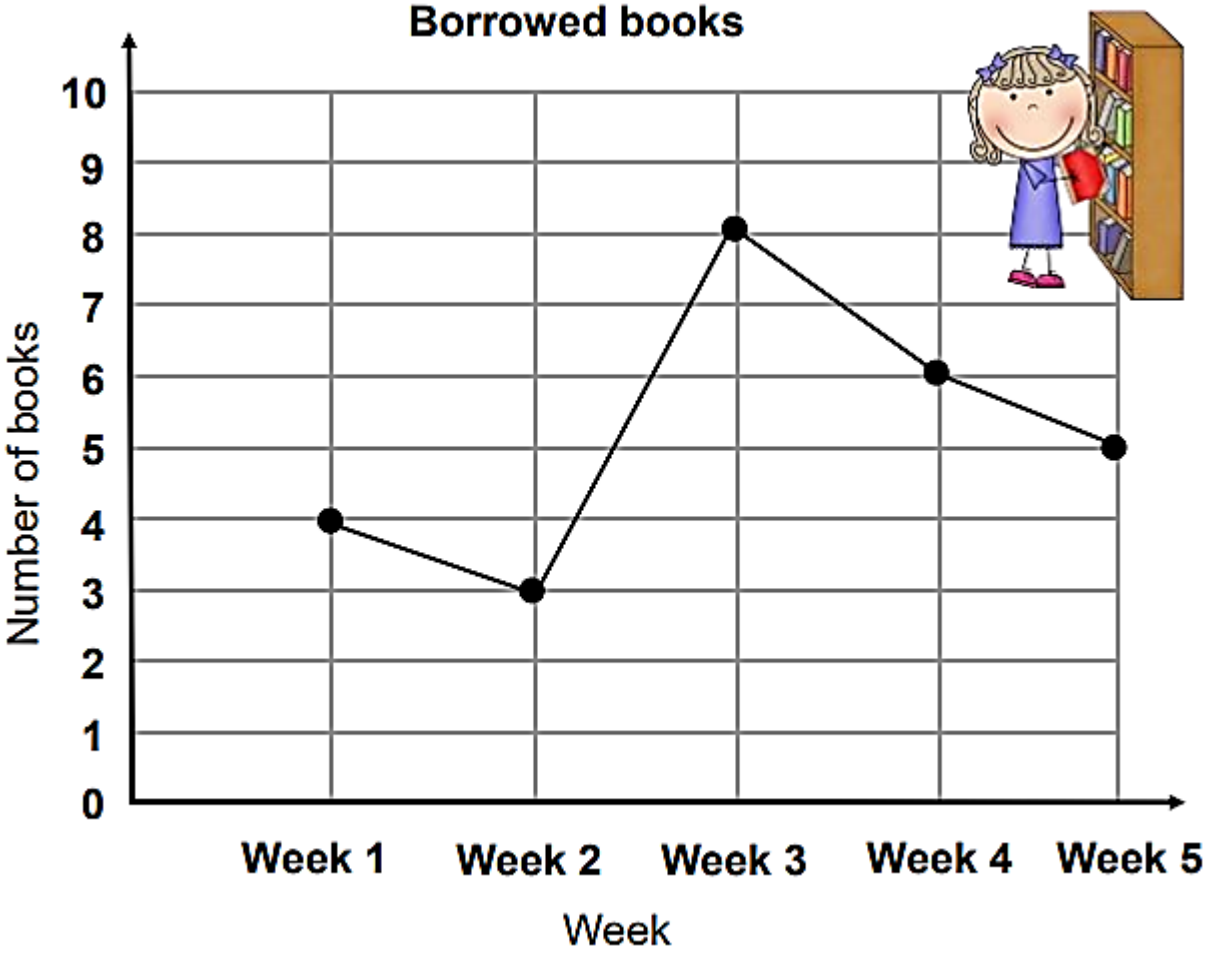
d) Which month has the fewest newspapers collected?

_____

e) What is the difference between the total collection of Grades 4 and Grade 5?

_____

Q17. Carol recorded the number of books she borrowed for 5 weeks.



a) How many books were borrowed on week 4?

_____

b) What week did Carol borrow 6 books?

_____

c) How many more books were borrowed on week 1 than week 2?

_____

d) What week did Carol borrow the most books?

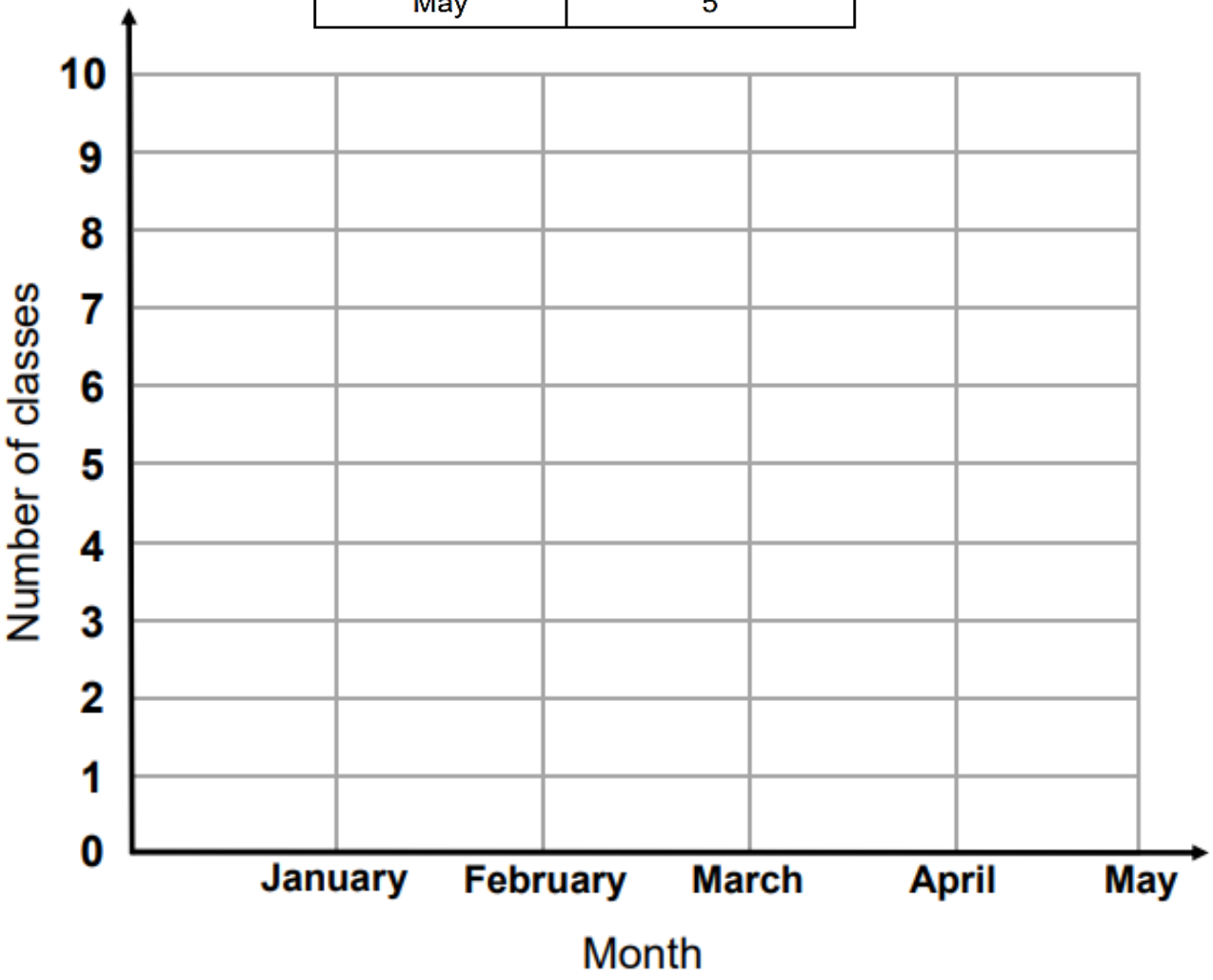
_____

e) What week did Carol borrow the fewest books?

_____

Q18. Mary recorded the number of ballet classes she had for 5 months. Draw a line graph using the given data.

Month	Number of classes
January	8
February	7
March	6
April	10
May	5



Teachers: Eman Nabas and Qusie Hijazeen

Rosary School \ Marj Elhamam

Name : _____ Date : / 10 / 2025

Subject: Worksheet (2) / unit (2) Grade : 6 ( )

Number

2.1 Rules of Divisibility

Q1: Answer the Following questions and explain your answer.

a. Is 236 divisible by 2? _____

b. Is 315 divisible by 5? _____

c. Is 432 divisible by 3? _____

d. Is 624 divisible by 4? _____

e. Is 777 divisible by 9? _____

f. Is 780 divisible by 10? _____

g. Is 96 divisible by 2 and 3? _____

Q2: Write a number divisible by 2, 3, and 5. _____

Q3: Which of these are divisible by 9? 54, 88, 81, 136, 108

Q4: A box of 120 apples must be shared equally among 10 students. Can it be divided evenly?

_____

Q5: A company prints 3,456 brochures. Can they pack them into boxes of 4 without leftovers?

_____

2.2 Factors, Multiples, and Primes

Q1: List all factors of 36. _____

Q2: List all factors of 40. _____

Q3: List the first 5 multiples of 9. _____

Q**4:** Write all prime numbers between 10 and 30. _____

Q5: Is 51 a prime number? Explain why.

_____

Q6: Work out the HCF of 12 and 16.

Q7: Work out the LCM of 8 and 10.

Q8: Work out the HCF and LCM of 9 and 27.

Q9: Sarah has 20 red pens and 30 blue pens.

She wants to pack them in boxes equally.

What is the greatest number of boxes she can make?

Q10: A bus stops at a station every 15 minutes, and a train stops there every 20 minutes.

They both stop at the New York station together.

After how many minutes will be the first meeting of the bus and the train in that New York station.

2.3 Positive and Negative Numbers

Q1: Arrange the following numbers in ascending order:

–4 5 –9 0 7 -2

_____, _____, _____, _____, _____, _____

Smallest

Q2: Work out.

a. 7 + –9 = _____

b. –12 – –5 = _____

c. –8 + 10 = _____

d. –9 – 3 = _____

e. 9 – –4 = _____

f. + 6 × + 4 = _____

g. – 5 × + 3 = _____

h. + 7 × - 2 = _____

I. – 8 × - 5 = _____

J. – 9 × +6 = _____

Q3: Compare: –3 ☐ 1

Q4: Draw a ring around the smallest number.

–7 –10 -13 - 3 0

Q5: A submarine is 60 m below sea level.

It rises by 25 m.

What is its new depth?

Q6: The temperature was –3°C at night and rose by 8°C during the day.
What is the daytime temperature?

Q7: An elevator starts at floor 0, goes down 4 floors, then up 9 floors.
What floor is it on?

Q8: A freezer temperature is –12°C. If it increases by 6°C, what is the new temperature?

2.4 Squares and Square Roots

Q1: Write the first 10 square numbers.

_____

Q2: Work out.

a. 5^2 = _____

b. 0.8^2 = _____

c. $\sqrt{64}$ = _____

d. $\sqrt{49}$ = _____

e. $\sqrt{100} \times \sqrt{81}$ = _____

f. $\sqrt{121}$ = _____

G. $(\sqrt{36})^2$ = _____

Q3: A square garden has a side length of 12 m.
Find its area.

Q4: The area of a square is 36 cm^2.
Find the length of one side.

Q5: work out estimate:

a. $\sqrt{5}$ =

b. $\sqrt{90}$ =

2.5 More Powers and Roots.

Work out.

a. $7^2 + 0.4^2$ = _____

b. $9^2 - 5^2$ = _____

c. $(4 + 3)^2$ = _____

d. $\sqrt[3]{125} =$ _____

e. $\sqrt[3]{-8} =$ _____

f. $4 \times \sqrt[3]{1000} - 20 =$ _____

g. $4 \times \sqrt[3]{64} =$ _____

h. $\frac{36}{4} - 15 =$ _____

I. $\frac{\sqrt{100}}{2} + 15 =$ _____

J. $\sqrt[3]{729} =$ _____

k. $6 \times 2^3 - 20 =$ _____

l. $4^3 + 5^2 =$ _____

m. $9 \times \sqrt[3]{8x27} =$ _____

n. $\frac{25}{\sqrt[3]{125}} - 2^2 =$ _____

2.6 calculations.

Q1: Write these calculations in **ascending** order:

$\sqrt[3]{27} - 2,\ \ \sqrt{25} - \sqrt[3]{8},\ \ \ \sqrt{16} + 5$

_____, _____, _____

Smallest

Q2: Write these calculations in **descending** order:

$\sqrt{49} - \sqrt[3]{8},\ \ \sqrt[3]{27} + 1,\ \ \sqrt{36} - 4$

_____, _____, _____

Largest

Q3: Work out

a. $5\,(9-3) =$ _____

b. $(12-7)^2 =$ _____

c. $(3 + 4 \times 2)^2 =$ _____

d. $(30 \div 5 - 2)^2 =$ _____

e. $\frac{8+22}{13-8} =$ _____

f. $(-3)^3 =$ _____

g. $\sqrt{64} + 2 \times 6 =$ _____

h. $(20 \div 5 + 7)^2 =$ _____

i. $\frac{\sqrt{12+4}}{4} =$ _____

j. $\sqrt{70 + 3 \times 10} =$ _____

Teachers :- Qusie Hijazeen, Eman Nabbas

Rosary School \ Marj Elhamam

Name : _____ Date : / 11 / 2025

Subject: Worksheet 3/ Unit 3 Grade : 6 ( )

➢ 3.1 Simplifying algebraic expressions

Q1. Simplify each expression by combining like terms.

a. $4x + 7x =$ _____

b. $5a + 3a =$ _____

c. $9y - 4y =$ _____

d. $12m + 8n + 3m =$ _____

e. $6p + 2p + 10 =$ _____

f. $8k - 5k + 12 =$ _____

g. $11a + 6b - 4a + 2b =$ _____

h. $4a + 9 + 6a - 3 =$ _____

i. $7y + 3 - 4y + 5 =$ _____

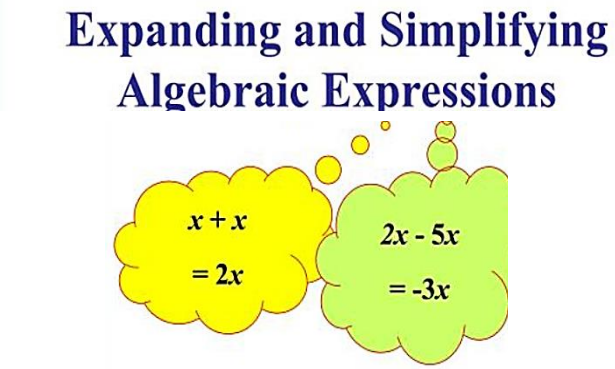
j. $4a \times 5a =$ _____

k. $6m \times -2m =$ _____

l. $x \times 11 \times y =$ _____

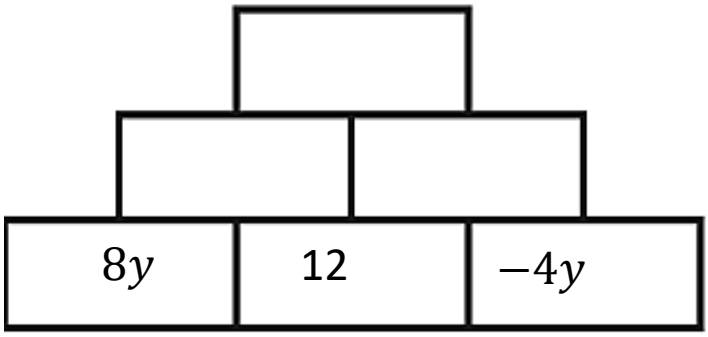
m. $5 \times y \times x =$ _____

n. $2 \times x \times 4 \times y =$ _____

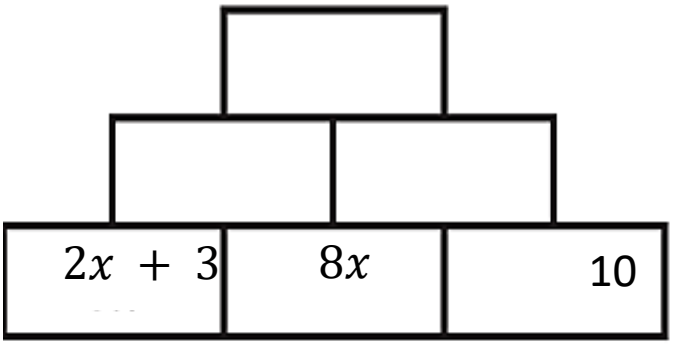


Q2. Complete these addition pyramids.

a.

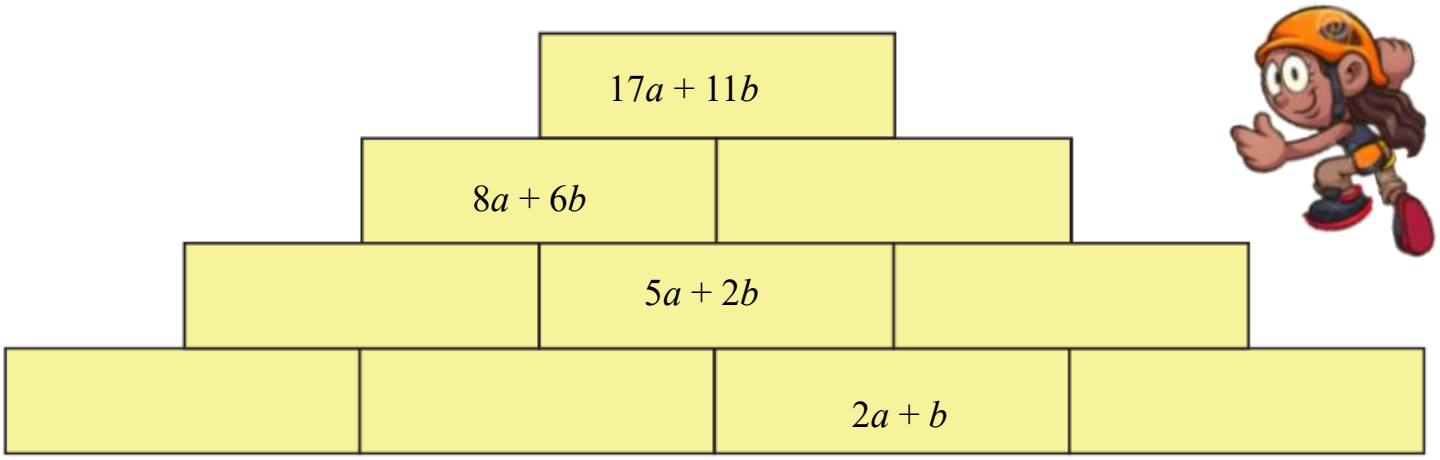


b.



Q3. Complete this algebraic pyramid.

Remember, you find the expression in each block by <u>adding</u> the expressions in the two blocks below it.



➢ 3.2 Writing algebraic expressions

Q1. Write each as an expression.

a. Three more than twice ***R*** → _____

b. Five less than ***X*** → _____

c. Ten more than half ***T*** → _____

d. ***B*** divided by 3, then increased by 7 → _____

e. Double ***E***, then subtract 9 → _____

f. Three times a ***S*** → _____

Q2. A man is ***n*** years old.

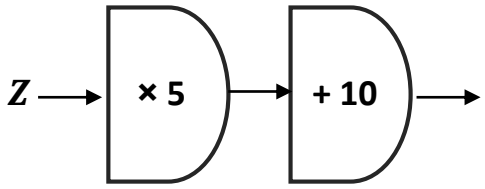
a. How old was he 12 years ago? _____

b. The man's wife is 6 years **younger** than he is. How old is she? _____

c. The man's mother is **twice** his age. How old is she? _____

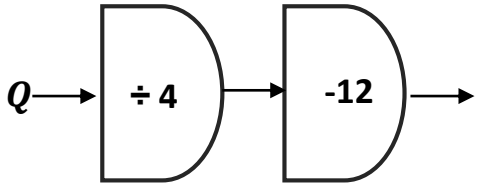
Q3. Write an expression for the output of the function machine.

a.



_____

b.



_____

➢ 3.3 Using formulae

Q1. Work out the **value** of each expression.

a. $g + 2f$ when $g = 22$ and $f = 8$

b. $3h - 4w$ when $h = 7$ and $w = 12$

c. $\frac{n}{5}$ when $n = 85$

d. $\frac{24}{k} - 3v$ when $k = 3$ and $v = 5$

Q2. Find the value of each expression when $\boldsymbol{a} = \mathbf{2}$ and $\boldsymbol{b} = \mathbf{-4}$.

a. $3a + b$ _____

b. $5a - 2b$ _____

Q3. A chemist uses the formula

$$C = \frac{m}{V}$$

to calculate the concentration of a solution, where m is the mass of solute (in g) and V is the volume of solution (in L). Work out the concentration C for:

a. 10 g of solute in 2 L of solution

b. 25 g of solute in 5 L of solution

Q4. A mechanic uses the formula $\boldsymbol{F = ma}$ to calculate the force on a car, where $\boldsymbol{m}$ is the mass (in kg) and $\boldsymbol{a}$ is the acceleration (in m/s²). Work out the force $\boldsymbol{F}$ on a car with:

a. Mass 1200 kg and acceleration 3 m/s²

b. Mass 800 kg and acceleration 5 m/s²

➢ 3.4 Writing formulae

Q1. a. Max has a Saturday job and he earns \$8 per hour.

Write a formula connecting the amount, $\boldsymbol{P}$, he is paid, in dollars, with the number of hours he works, $\boldsymbol{h}$.

_____

b. A can of soda costs \$0.75.

Write a formula connecting the cost, $\boldsymbol{C}$, in \$, with the number of cans of soda bought, $\boldsymbol{n}$.

_____

c. Amir has £11.
Write a formula to calculate the amount of money Amir has left, $\boldsymbol{A}$, in £, after spending \$ $\boldsymbol{n}$.

_____

➢ 3.5 Brackets and formulae

Q1. Expand the brackets.

a. $7 (5 + g) =$ _____ b. $11 (3s – 4) =$ _____

c. $4x (4 – x) =$ _____ d. $8 (6 + 4w) =$ _____

Q2. Which one of these expressions is the odd one out?
Explain your answer.

$4(9x + 12)$ $1(48 + 36x)$ $2(18x + 24)$

$9(4x + 5)$ $6(6x + 8)$

Q3. Samira has 4 beads and 2 pots.

She puts the beads in the pots.

a represents the number of beads in one pot.

b represents the number of beads in the other pot.

Write all possible sets of values for a and b.

$a =$ _____ and $b =$ _____

$a =$ _____ and $b =$ _____

$a =$ _____ and $b =$ _____

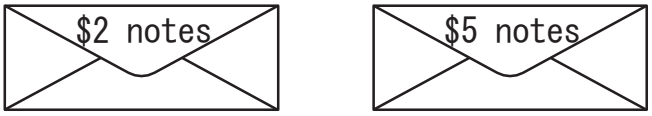
$a =$ _____ and $b =$ _____

$a =$ _____ and $b =$ _____

➢ Past Paper Questions

Q1. Eva has some $2 notes and some $5 notes.

She keeps them in two separate envelopes.



A represents the **total amount** in the envelope that contains the $2 notes.

B represents the **total amount** in the envelope that contains the $5 notes.

A + B = $25

Write a possible pair of values for A and B.

A = $ _____

B = $ _____

[1]

Q25, 0096/02/A/M/25

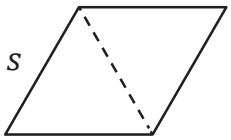
Q2. The perimeter, p, of an equilateral triangle with side length, s, is written as

$$p = s + s + s$$

(a) Find the value of p if s = 12 cm.

_____ cm [1]

(b) Two **identical** equilateral triangles are joined together to make a new shape.



Draw a ring around the correct expression for the perimeter, d, of the new shape.

d = s + s + s

d = s + s + s + s

d = s + s + s + s + s

d = s + s + s + s + s + s

[1]

Q13 ,0096/01/O/N/23

Q3. Pierre has some $1 notes **and** some $2 notes.
The total value of the notes is $50

g represents the number of $1 notes Pierre has.
h represents the number of $2 notes Pierre has.

(a) Write the value of **g** when **h** is 10

_____ [1]

(b) Write the largest possible value of **h**.

_____ [1]
Q27, 0096/02/O/N/24

Q4.
Ahmed and Yuri have some pencils.
Ahmed has **more** pencils than Yuri. Yuri has an **even** number of pencils.

The number of pencils Ahmed has is represented by 

The number of pencils Yuri has is represented by 

 +  is greater than 60

If  is 45 write **two** possible values for 

_____ or _____ [1]

Rosary School \ Marj Elhamam

Name : _____ Date : / 10 / 2025

Subject: Worksheet (4) / unit (4) Grade : 6 ( )

Fractions

4.1 working with fractions

Q1. Work out the highest common factor of.

a) 24 and 40

HCF = _____

b) 7 and 35

HCF = _____

Q2. Write $>$, $<$ in the box to make the statement correct.

a. $\frac{9}{8} \square \frac{5}{8}$ b. $\frac{3}{4} \square \frac{5}{6}$ c. $\frac{5}{12} \square \frac{3}{4}$

Q3. A shop sells 24 basketball jerseys. 6 of them are Lakers jerseys.
What fraction of the jerseys are Lakers jerseys?
Write your answer in its simplest form.

Q4. Out of the 20 most popular tennis players, 4 are from Spain.
What fraction of the top 20 players are not Spanish?
Write your answer in its simplest form.

Q5. The table shows the number of games won by each player in each set of a match in a tennis tournament.

	Set1	Set2	Set3
Player A	5	3	4
Player B	7	6	5

What fraction of all the games in the match did Player A win?
Write your answer in its simplest form.

Q6.

a. What is $\frac{5}{6}$ of 42 kg.

_____ kg

b. A rectangle is 15 cm long and 8 cm wide.
Layla shades $\frac{2}{5}$ of the rectangle.
What area of the rectangle does Layla shade?

_____ cm^2

4.2 Adding and subtracting fractions

Q1. Work out the lowest common multiple.

a. 5 and 7

LCM= _____

b. 9 and 12

LCM= _____

Q2. Write these improper fractions as mixed numbers.

a. $\frac{9}{4}$ =

b. $\frac{16}{7}$ =

c. $\frac{23}{3}$ =

Q3. Which is larger $1\frac{3}{4}$ or $\frac{6}{4}$?

Q4. Work out

a. $\frac{1}{3} + \frac{8}{9}$ =

b. $3 - \frac{16}{7}$ =

c. $5\frac{1}{4} - 2\frac{7}{12}$ =

Q5. A carpenter glues together a strip of plastic that is $\frac{7}{12}$ cm thick and a strip of rubber that is $\frac{5}{8}$ cm thick.

What is the total thickness of two strips?

Q6. Yousef completed $\frac{7}{10}$ of his homework**.** Dana completed $\frac{3}{4}$ of hers.

Who completed more and by how much?

4.3 fractions, decimals and percentages.

Q1. Complete the table.

Write each fraction in its simplest form.

Fraction	**Decimal**	**Percentage**
		35%
	1.6	
$\frac{3}{8}$		

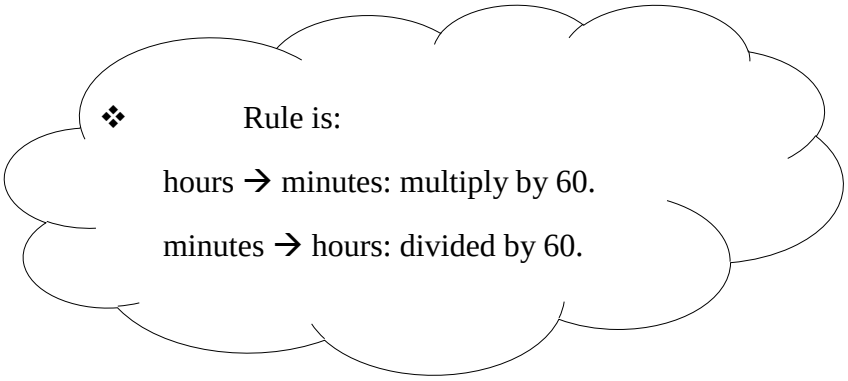
Q2. Write these fractions as decimals.

a. $\frac{3}{20}$ =

c. $\frac{12}{16}$ =

b. $\frac{24}{60}$ =

d. $\frac{13}{5}$ =



Q3. Draw a ring around the numbers that give the same time intervals.

0.25 hour	$\frac{1}{5}$ hour
$\frac{1}{4}$ hour	15 minutes
25 minutes	0.15 hour

Q5. Using the fact that $\frac{1}{4} = 0.25$ to write the following as decimal.

1. $\frac{3}{4}$ =

2. $\frac{1}{2}$ =

3. $\frac{5}{4}$ =

Q6. Write the missing numbers.

a. $\frac{8}{50}$ = _____%

b. $\frac{12}{25}$ = _____%

c. _____% = 0.24

4.4 multiplying by a fraction.

Q1. Work out

a. $\frac{3}{4} \times 56$ =

b. $45 \times \frac{1}{9}$ =

c. $14 \times \frac{6}{7}$ =

d. $24 \times \frac{6}{8}$ =

Q2. A recipe needs $\frac{2}{3}$ cup of sugar. Maya makes 4 batches.

How much sugar does she need?

_____ cups

Q3. A rectangle is 18 cm long and 10 cm wide**.**

Ali shades $\frac{2}{5}$ of the rectangle.

Find the area shaded**.**

_____ cm^2

Q4. A tank holds 200 litres of water.

$\frac{3}{8}$ leaks out.

How many liters leak out?

_____ litres

4.5 working with mixed numbers.

Q1. Work out

a. $1\frac{2}{3} + 2\frac{1}{6}$ = _____

b. $3\frac{1}{2} + 4\frac{2}{4}$ = _____

c. $4\frac{1}{5} + 2\frac{7}{10}$ = _____

d. $6\frac{1}{4} - 2\frac{7}{12}$ = _____

e. $5\frac{7}{12}$ - $2\frac{1}{4}$ = _____

f. $5\frac{3}{5} - 2\frac{4}{5}$ = _____

Q3. Solve the following problems.

a. A board is $6\frac{1}{2}$ metres long. A carpenter cuts off $2\frac{3}{4}$ metres.

How much is left?

_____ metres

b. Layla walked $2\frac{1}{2}\ km$ in the morning and $3\frac{3}{4}\ km$ in the evening.
How far did she walk in total?

_____ km

c. A runner completes $1\frac{3}{8}\ km$ each lap. He runs 5 laps.
What distance does he run?

_____ km

d. A recipe uses $1\frac{1}{4}$ cups of flour per cake. How much flour is needed for 3 cakes?

_____ $cups$