

## Year 3 Term 3 Homework

<b>Student Name:</b> _____	<b>Grade:</b> _____
<b>Date:</b> _____	<b>Score:</b> _____

### Table of contents

<b>1</b>	<b>Year 3 Term 3 Week 1 Homework</b>	<b>1</b>
1.1	Topic 1 — Numeration . . . . .	1
1.1.1	Roman Numerals: . . . . .	1
1.1.2	Roman Numerals 1 . . . . .	2
1.1.3	Roman Numerals 2 . . . . .	3
1.2	Topic 2 — Space Strand (2D) . . . . .	4
1.3	Topic 3 — Space Strand (3D) . . . . .	6
1.4	Topic 4 — Position . . . . .	8
1.5	Topic 5 — Graphs . . . . .	9
1.6	Problem Solving (Number Problems) . . . . .	10
1.6.1	Number Problem 1 . . . . .	10
1.6.2	Number Problem 2 . . . . .	11
1.7	Quiz 1 . . . . .	12

This edition was printed on September 5, 2021 **with Answers / Worked Solutions.**

Camera ready copy was prepared with the **L<sup>A</sup>T<sub>E</sub>X<sup>2</sup><sub>ε</sub>** typesetting system.

Copyright © 2000 - 2021 Yimin Math Centre

# 1 Year 3 Term 3 Week 1 Homework

## 1.1 Topic 1 — Numeration

### 1.1.1 Roman Numerals:

Roman Numerals were very popular about 2000 years ago. The Roman number system are based on the idea of **addition** and **subtraction**.

- When a smaller numeral appears before a large one, it is **subtracted** from the large one:

$$\text{IV means } 5 - 1 = 4$$

$$\text{XL means } 50 - 10 = 40$$

- When a smaller numeral appears after the larger one, it is **added** to the large one.

$$\text{VI means } 5 + 1 = 6$$

$$\text{LX means } 50 + 10 = 60$$

- By repeating a numeral, its value is repeated.

$$\text{XX} = 10 + 10 = 20$$

$$\text{XXX} = 10 + 10 + 10 = 30$$

- By placing a bar over the numeral, its value is increased by 1000 times.

$$\begin{array}{l|l} \overline{\text{V}} = 5000 & \overline{\text{X}} = 10,000 \\ \overline{\text{L}} = 50,000 & \overline{\text{C}} = 100,000 \\ \overline{\text{D}} = 500,000 & \overline{\text{M}} = 1,000,000 \end{array}$$

The table below gives more details of the Roman numeral system:

I	II	III	IV	V	VI	VII	VIII	IX
1	2	3	4	5	6	7	8	9
X	XX	XXX	XL	L	LX	LXX	LXXX	XC
10	20	30	40	50	60	70	80	90
C	CC	CCC	CD	D	DC	DCC	DCCC	CM
100	200	300	400	500	600	700	800	900
M								
1000								

**1.1.2 Roman Numerals 1**

① 109 = \_\_\_\_\_

② 52 = \_\_\_\_\_

③ 55 = \_\_\_\_\_

④ 97 = \_\_\_\_\_

⑤ 150 = \_\_\_\_\_

⑥ 105 = \_\_\_\_\_

⑦ 120 = \_\_\_\_\_

⑧ 166 = \_\_\_\_\_

⑨ 106 = \_\_\_\_\_

⑩ 149 = \_\_\_\_\_

⑪ 20 = \_\_\_\_\_

⑫ 174 = \_\_\_\_\_

⑬ 72 = \_\_\_\_\_

⑭ 179 = \_\_\_\_\_

⑮ 89 = \_\_\_\_\_

⑯ 70 = \_\_\_\_\_

⑰ 136 = \_\_\_\_\_

⑱ 90 = \_\_\_\_\_

⑲ 102 = \_\_\_\_\_

⑳ 165 = \_\_\_\_\_

Score: \_\_\_\_\_

## 1.1.3 Roman Numerals 2

- ① CXXVI = \_\_\_\_\_
- ② CXXXVIII = \_\_\_\_\_
- ③ XXXIX = \_\_\_\_\_
- ④ LXXXVII = \_\_\_\_\_
- ⑤ LXXVIII = \_\_\_\_\_
- ⑥ LXXIII = \_\_\_\_\_
- ⑦ CXXXII = \_\_\_\_\_
- ⑧ XXXVI = \_\_\_\_\_
- ⑨ XLV = \_\_\_\_\_
- ⑩ CLXXXII = \_\_\_\_\_
- ⑪ LXVIII = \_\_\_\_\_
- ⑫ CXIX = \_\_\_\_\_
- ⑬ XX = \_\_\_\_\_
- ⑭ CL = \_\_\_\_\_
- ⑮ XXVI = \_\_\_\_\_
- ⑯ XXXIII = \_\_\_\_\_
- ⑰ LXIV = \_\_\_\_\_
- ⑱ CXCIII = \_\_\_\_\_
- ⑲ LVIII = \_\_\_\_\_
- ⑳ CLII = \_\_\_\_\_

Score: \_\_\_\_\_

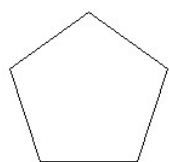
**1.2 Topic 2 — Space Strand (2D)**

2D shapes are flat and have no depth. They are in one plane and are referred to as plane shapes. Shapes like triangle, quadrilateral, pentagon, hexagon and circle are 2D shapes.

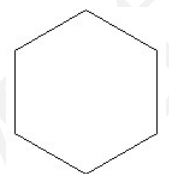
1. Name the following shapes:



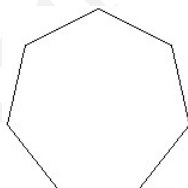
- (a) (A) Circle (B) Triangle (C) Rectangle (D) Oval



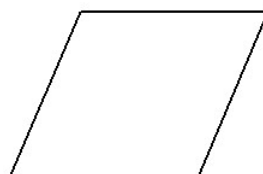
- (b) (A) Hexagon (B) Pentagon (C) Rectangle (D) Rhombus



- (c) (A) Hexagon (B) Pentagon (C) Rectangle (D) Rhombus



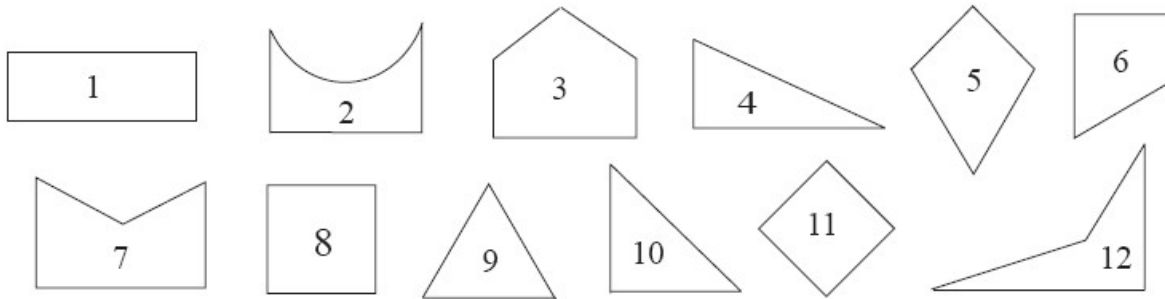
- (d) (A) Hexagon (B) Heptagon (C) Rectangle (D) Rhombus



- (e) (A) Hexagon (B) Heptagon (C) Rectangle (D) Rhombus

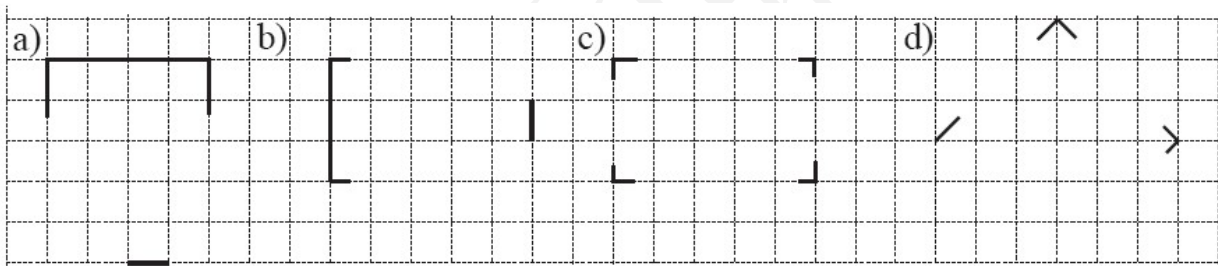
**Quadrilaterals:** A quadrilateral is a four-sided figure. Some quadrilaterals contain parallel lines. Shapes like the parallelogram, rectangle, rhombus and square are quadrilaterals.

2. List the numbers of the shapes which are:

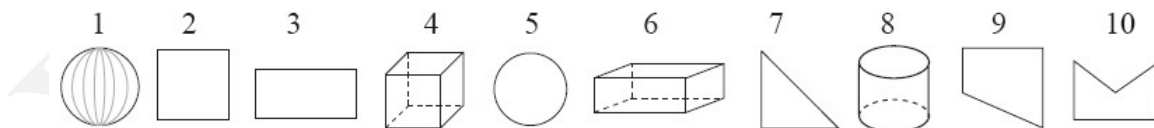


- (a) Quadrilaterals: \_\_\_\_\_
- (b) Rectangles: \_\_\_\_\_
- (c) Squares: \_\_\_\_\_

3. Complete the drawing to make rectangles.



4. Which shape belongs in which?

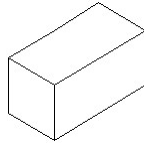


- (a) Plane Shapes: \_\_\_\_\_
- (b) Rectangles: \_\_\_\_\_
- (c) Solids: \_\_\_\_\_
- (d) Quadrilateral: \_\_\_\_\_

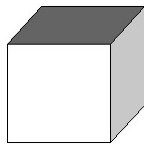
**1.3 Topic 3 — Space Strand (3D)**

Shapes like the **Cube**, **Cylinder**, **Cone** and **Sphere** are 3D objects.

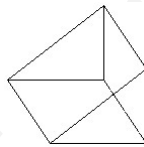
1. Name the following shapes:



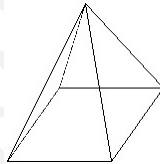
- (a) (A) Cylinder (B) Cone (C) Cube (D) Rectangular Prism



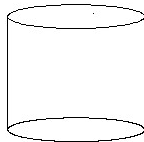
- (b) (A) Rectangular Prism (B) Cube (C) Cone (D) Triangular Prism



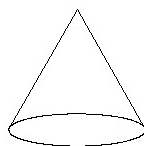
- (c) (A) Triangular Prism (B) Rectangular Prism (C) Square Prism (D) Square Pyramid



- (d) (A) Square Prism (B) Square Pyramid (C) Triangular Pyramid (D) Cone



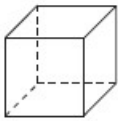
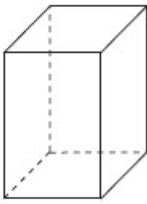
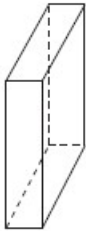

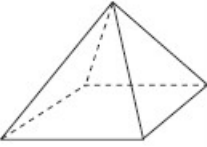
- (e) (A) Cone (B) Sphere (C) Cylinder (D) Cube



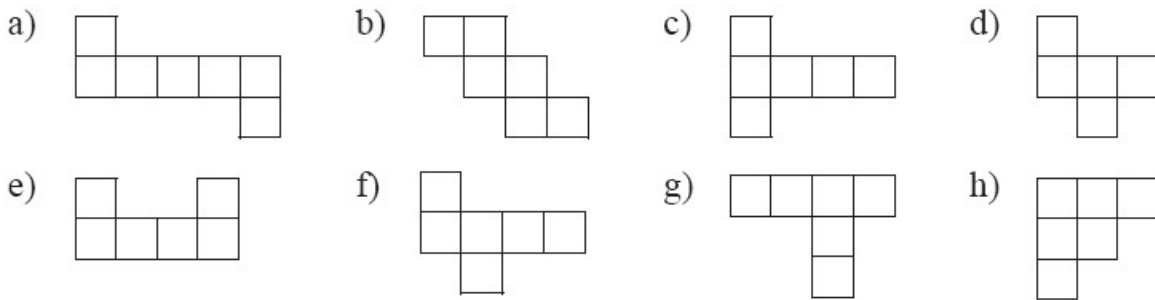
- (f) (A) Cone (B) Cylinder (C) Sphere (D) Square Pyramid

2. Complete the table for these solids given below:

Complete the table for these solids.

					
Number of faces					
Number of vertices					
Number of edges					

3. Colour the nets which could be folded to make a cube.



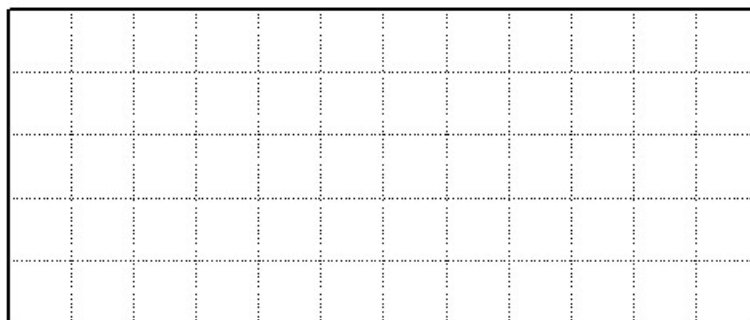
4. Which solid has 2 circular faces and a curved surface?

---



---

5. Draw the solid described above.





### 1.4 Topic 4 — Position

1. Looking at the grid, describe in words the position of:

	A			B
C				
		D		
			E	

(a) the letter A in relation to the letter B.

\_\_\_\_\_

(b) the letter C in relation to letter D.

\_\_\_\_\_

(c) the letter B in relation to letter C.

\_\_\_\_\_

(d) the letter E in relation to letter B.

\_\_\_\_\_

(e) the letter D in relation to letter A.

\_\_\_\_\_

2. Mark the following position on the grid, joining them up as you go. What shape is formed?

H												
G												
F												
E												
D												
C												
B												
A												
	1	2	3	4	5	6	7	8	9	10	11	12

You start from 4A, 4D, 2D, 2F, 4F, 4G, 5G, 5F, 11F, 11E, 9E, 9A, 8A, 8C, 5C, 5A, 4A.

Also put a dot at 4E.

### 1.5 Topic 5 — Graphs

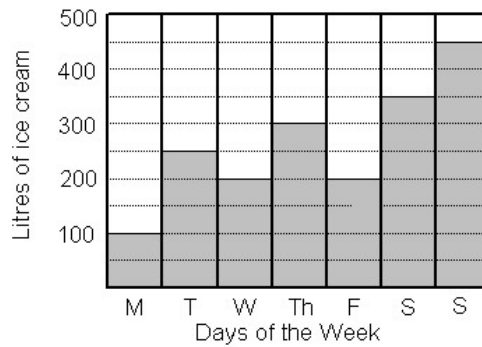
A graph is a way of showing information in the form of a diagram. There are several types of graphs such as **Tally Marks**, **Column Graphs** and **Picture Graphs**.

1. Prepare a tally chart to show the following information.

Grade 3 was surveyed about favourite colours:

- (a) 14 students chose red: \_\_\_\_\_
- (b) 2 students chose purple: \_\_\_\_\_
- (c) 8 students chose yellow: \_\_\_\_\_
- (d) 16 students chose green: \_\_\_\_\_
- (e) 12 students chose blue: \_\_\_\_\_

2. The graph below shows the ice cream sold on each day of the week:



- (a) How many litres of ice cream were sold on Thursday?  
\_\_\_\_\_
- (b) On which day was the most ice cream sold?  
\_\_\_\_\_
- (c) On which days were the same amounts of ice cream sold?  
\_\_\_\_\_
- (d) How much more ice cream was sold on Sunday than on Friday?  
\_\_\_\_\_
- (e) How many litres of ice cream were sold on the whole week?  
\_\_\_\_\_

**1.6 Problem Solving (Number Problems)****1.6.1 Number Problem 1**

- ① \_\_\_\_\_ Nine is equal to the quotient of a number and 4. Find the number.
- ② \_\_\_\_\_ The difference of a number and three is equal to 4. What is the number?
- ③ \_\_\_\_\_ Three less than a number is 2. Find the number.
- ④ \_\_\_\_\_ The quotient of a number and five is 6. Find the number.
- ⑤ \_\_\_\_\_ The sum of a number and nine is 13. Find the number.
- ⑥ \_\_\_\_\_ 27 is equal to the product of nine and some number. Find the number.
- ⑦ \_\_\_\_\_ The product of five and a number is 30. What is the number?
- ⑧ \_\_\_\_\_ Five times a number increased by 3 is 58. Find the number.
- ⑨ \_\_\_\_\_ Three is equal to the quotient of a number and 9. Find the number.
- ⑩ \_\_\_\_\_ The difference of a number and six is equal to 9. What is the number?

---

Score: \_\_\_\_\_

## 1.6.2 Number Problem 2

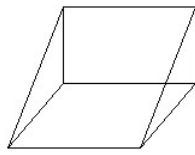
- ① \_\_\_\_\_ 45 is equal to the product of nine and some number. Find the number.
- ② \_\_\_\_\_ Nine is equal to the quotient of a number and 4. Find the number.
- ③ \_\_\_\_\_ Four less than a number is 7. Find the number.
- ④ \_\_\_\_\_ Four more than five times a number is 49. What is the number?
- ⑤ \_\_\_\_\_ Ten times a number increased by 5 is 25. Find the number.
- ⑥ \_\_\_\_\_ The difference of a number and three is equal to 9. What is the number?
- ⑦ \_\_\_\_\_ One number is seven times another. Their sum is 24. Find the numbers.
- ⑧ \_\_\_\_\_ Four times a number decreased by 27 is 17. Find the number.
- ⑨ \_\_\_\_\_ The product of five and a number is 30. What is the number?
- ⑩ \_\_\_\_\_ The quotient of a number and seven is 8. Find the number.

---

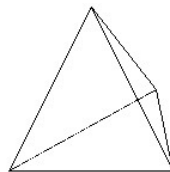
Score: \_\_\_\_\_

### 1.7 Quiz 1

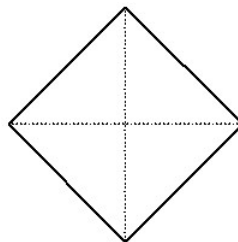
1. Name this prism: \_\_\_\_\_



2. Name this pyramid: \_\_\_\_\_



3. Name this pyramid: \_\_\_\_\_



4. 63 is equal to the product of seven and a number. Find the number.

\_\_\_\_\_

\_\_\_\_\_

5. Five times a number increased by 5 is 45. Find the number.

\_\_\_\_\_

\_\_\_\_\_

6. One number is eight times another. Their sum is 45. Find the numbers.

\_\_\_\_\_

\_\_\_\_\_

7. Jeffrey bought  $1\frac{1}{2}$  kg of biscuits. Jessica ate 150 g, Matthew ate 135 g, George ate 125 g and Stanley ate twice as much as George. What is the mass of the biscuits left?

---

---

8. How many chocolate bars each weighing 125 g can be made from a 48 kg batch of chocolate?

---

---

9. Change the Roman numeral into our own numeral: DCLXVI = \_\_\_\_\_

10. Change the Hindu-Arabic numeral into Roman numerals: 2007 = \_\_\_\_\_

11. What number is 121 more than 149?

---

12. What number is 128 less than 2007?

---

13. Martin has collected 15 aluminium cans for recycling. Peter has collected five times as many as Martin. How many cans have they collected altogether?

---

---

14. Keith has 12 fish. Sam has three times as many as Keith. James has twice as many as Sam. How many fish does James have?

---

---

15. 288 people travelled by bus to the zoo. If they were divided into 12 groups, how many people were in each group?

---

---

16. 624 marbles are shared equally between 6 children. How many marbles does each child get?

---

---

17. What am I?

(a) Divide me by 8 and you will get 128: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) I am four times the difference between 30 and 23:

\_\_\_\_\_

\_\_\_\_\_

(c) I am twice the sum of 15 and 17: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(d) Multiply half of me by 9 and you will get 36:

\_\_\_\_\_

\_\_\_\_\_

(e) Halve me twice and I become 12: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(f) I am three times the sum of 16 and 24: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(g) Double me and subtract the result from 60 to make 24:

\_\_\_\_\_

\_\_\_\_\_

(h) Multiply me by myself and you will get  $\frac{1}{4}$ :

\_\_\_\_\_

\_\_\_\_\_

(i) Divide half of me by 5 and you will get 10:

\_\_\_\_\_

\_\_\_\_\_