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Mathematics PSAC - 2018

Time : 1 hour 45 minutes

Total : 100 Marks

1. Work out:

$$\begin{array}{r} 231 \\ + 452 \\ \hline \end{array}$$

Answer : _____ [1]

2. How many sides does a **triangle** have?

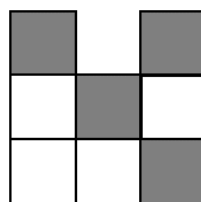
Answer: _____ [1]

3. Work out:

$$\begin{array}{r} 546 \\ - 205 \\ \hline \end{array}$$

Answer: _____ [1]

4. What fraction of the diagram is **shaded**?



Answer: _____ [1]

5. Work out:

$$\begin{array}{r} 312 \\ \times 3 \\ \hline \end{array}$$

Answer : _____ [1]

6. Convert 5 kg into g.

Answer: _____ g [1]

7. Work out:

$$4 \overline{) 480}$$

Answer : _____ [1]

8. Reduce $\frac{12}{18}$ to its lowest terms.

Answer: _____ [1]

9. Complete the table below. An example is given.

[2]

In words	In figures
Example : Five hundred and thirty eight	538
a) Two thousand one hundred and twenty
b)	749

10. Work out : $\frac{5}{9} + \frac{2}{9}$

Answer: _____

[1]

11. Write down the **missing** term in the sequence below.

30 , 25 , _____ , 15 , 10

[1]

12. Find the **value** of 4^2 .

Answer: _____

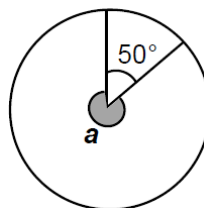
[1]

13. What is the Least Common Multiple (**L.C.M.**) of 8 and 10?

Answer: _____

[2]

14. Calculate angle **a**.



Answer: _____⁰

[2]

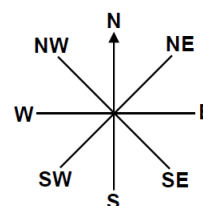
15. Circle the **prime** number in the list below.

17 , 21 , 25 , 27 , 36

[1]

16. Reena is facing **North**.

What direction will she face after making $\frac{1}{4}$ turn **clockwise**?



Answer: _____

[1]

For each question from numbers 17 to 28, circle the letter which shows the correct answer.
An example has been done for you.

$$6 + 2 =$$

A 8

B 12

C 10

D 14

17. Which one of the following is a **reflex** angle?

A 72°

B 135°

C 180°

D 234°

18. $\frac{3}{20}$ expressed as a **decimal** is

A 0.03

B 0.15

C 0.30

D 0.75

19. What is the Highest Common Factor (**H.C.F.**) of 28 and 42?

A 2

B 7

C 14

D 84

20. The value of 2 in 45.12 is

A 2 hundredths

B 2 tenths

C 2 units

D 2 tens

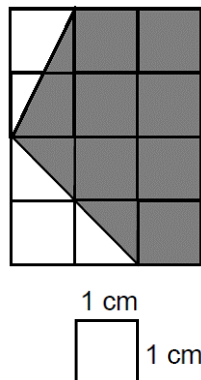
21. The **area** of the shaded region below is

A 8 cm^2

B 9 cm^2

C 10 cm^2

D 11 cm^2



22. Which one of the following items has its mass usually measured in **tonnes**?

A Aeroplane



B Pencil



C Apple



D Table



23. Which one of the following is a **common** year?

A 2008

B 2012

C 2018

D 2020

24. 40 marbles are shared in the ratio **2 : 3**.

The **smallest** share contains

A 8 marbles

B 16 marbles

C 20 marbles

D 24 marbles

25. $(5 \times 10) + (3 \times 1000) + (8 \times 1) + (4 \times 100) =$

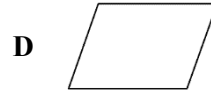
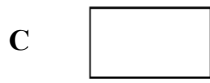
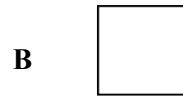
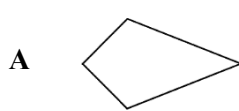
A 5384

B 5348

C 3458

D 3548

26. Which one of the following quadrilaterals has **only one** line of symmetry?



27. A jug contains 1.25 L of water.

How **many** such jugs of water are needed to fill a container of capacity 125 L completely?

A 10

B 100

C 1 000

D 10 000

28. A shopkeeper buys an egg for Rs 4.50.

At what price must he sell it to make a **profit** of Rs 1.75?

A Rs 2.75

B Rs 3.75

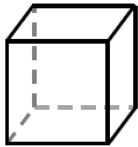
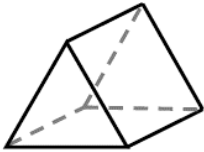

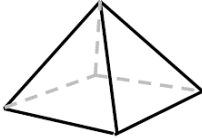
C Rs 5.25

D Rs 6.25

29. The table below shows four 3-D shapes. Fill in the blanks in the table.

[3]

An example has been done for you.

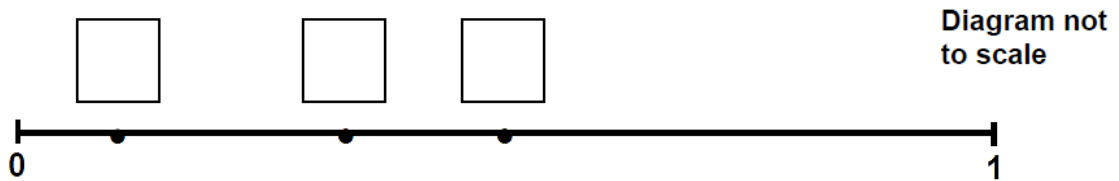
3-D shapes	Properties
Example : Cube 	Number of faces : 6 Number of edges : 12 Number of vertices : 8
(a) Triangular prism 	Number of faces :
(b) Triangular-based pyramid 	Number of edges :
(c) Square-based pyramid 	Number of vertices :

30. Fill in the blanks in the table below. An example is given.

[2]

Time on 24-hr clock	Time on 12-hr clock	Time in words
Example: 02 30	2.30 a.m.	Half past two in the morning
18 15

31. The dots on the number line below show the positions of **three** fractions between 0 and 1.



(a) Fill in each box above with the **correct** fraction from the following list:

$$\frac{1}{2}, \quad \frac{1}{10}, \quad \frac{1}{3} \quad [1]$$

(b) Explain why you decided to place the fractions in the positions above.

.....
 [1]

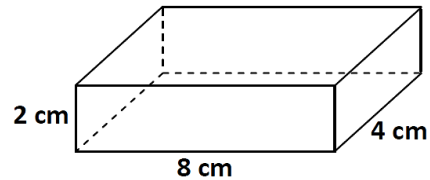
32. Work out : $\frac{3}{5} \div \frac{5}{8}$

Answer: _____ [2]

33. Find the **average** of 76, 121 and 211.

Answer: _____ [3]

34. (i) A **cuboid** has length 8 cm, width 4 cm and height 2 cm.
Find the **volume** of the cuboid.



Answer: _____ cm^3

[2]

- (ii) A **cube** has the **same** volume as the cuboid in **part (i)**.
Find the **length** of one side of the cube.

Answer: _____ cm

[1]

35. Josh knows that

$$\boxed{385} \times \boxed{439} = \boxed{169\,015}$$

Without doing any calculation, help Josh by writing down the missing numbers in the empty boxes below.

(a) $\boxed{169\,015} \div \boxed{385} = \boxed{}$

(b) $\boxed{38.5} \times \boxed{4.39} = \boxed{}$

(c) $\boxed{385} \times \boxed{} = \boxed{169\,015} - \boxed{385}$ [3]

36. A jacket costs Rs 3 600. The price of the jacket is **increased** by 12%.
Calculate the **new price** of the jacket.

Answer: Rs _____

[3]

37. A **rectangular** sheet of paper has length 17 cm and width 12 cm.

A square piece is cut out of the sheet of paper, and the shape below is obtained.

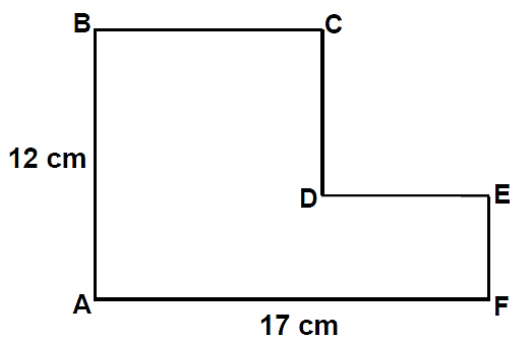


Diagram not to scale

(i) Find the **value** of

Length of **BC** + Length of **DE** = cm

[1]

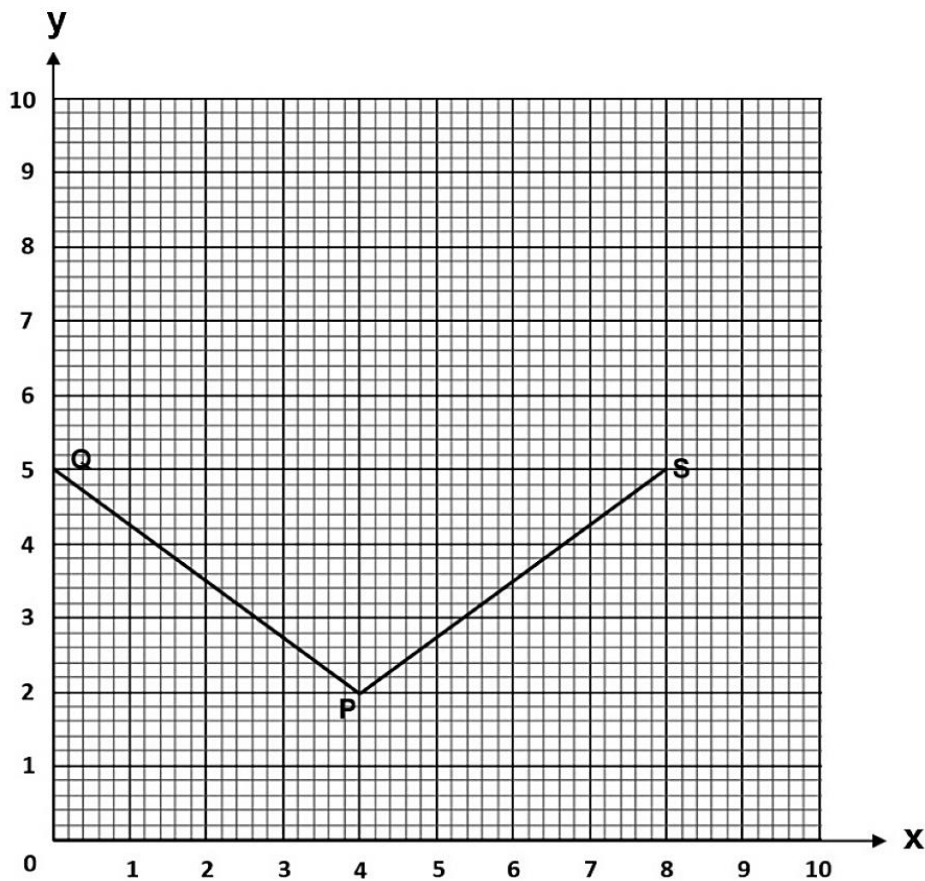
(ii) Find the **perimeter** of the shape **ABCDEF**.

[2]

Answer: _____ cm

[2]

38. **PQRS** is a **rhombus** with **P(4,2)**, **Q(0,5)** and **S(8,5)** plotted on the graph below.



- (a) Point **R** is not shown on the graph above.
Mark point **R** on the graph and write its coordinates.

Coordinates of **R**: (_____ , _____) [2]

- (b) The **lines of symmetry** of rhombus **PQRS** meet at point **T**.
 What are the coordinates of **T**?

Coordinates of **T**: (_____ , _____) [1]

39. Raj purchased some items from a store.
 When Raj returned home, he saw that his receipt was torn.
 Study the receipt carefully and answer the questions below.

Rainbow Store		
Curepipe Square Tel: 53541222		
<u>Cash Sale Receipt</u>		
Name: Raj		Date: 10.9.2017
Quantity	Item	Price (Rs)
2 boxes	Milk powder	305.00
1 litre	Oil	54.00
3 packets	Chocolate biscuits	36.75
		Total

- (a) What is the price of **one** packet of chocolate biscuits?

Answer: Rs _____ [2]

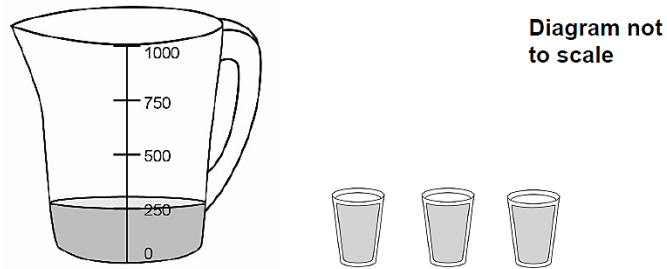
- (b) What is the **total** cost of all the items bought by Raj?

Answer: Rs _____ [2]

- (c) Raj paid his bill with a **one-thousand** rupee note.
 How much **change** did he receive?

Answer: Rs _____ [2]

40. A jug has a capacity of **one litre**. It contains 250 mL of orange juice.
 480 mL of water are poured into the jug.
Three glasses containing equal amounts of apple juice are then poured into the jug.
 The jug is now full.

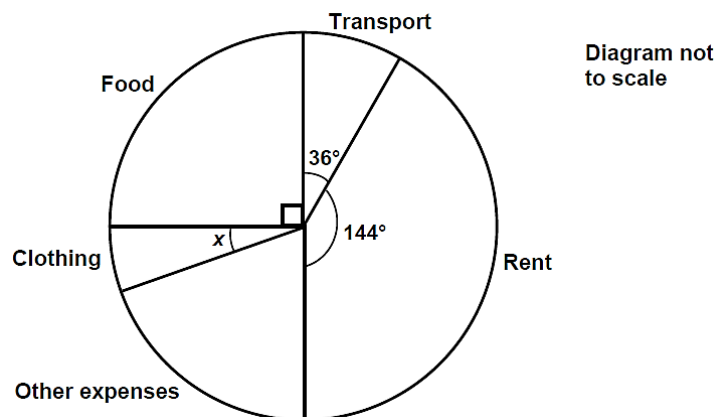


Find the **amount** of apple juice contained in each glass.

Answer: _____ mL

[4]

41. The pie chart below shows how Ben spent his money during a particular month.



- (a) Given that Ben spent Rs 8 000 on **Food**, calculate the **total** amount of money he spent in that month.

Answer: Rs _____

[3]