SUBJECT: MATHS

Contents:

Instructions:

1) Students MUST complete the study guide before revision classes.

2) Students are ALLOWED to use calculators for problem-solving tasks.

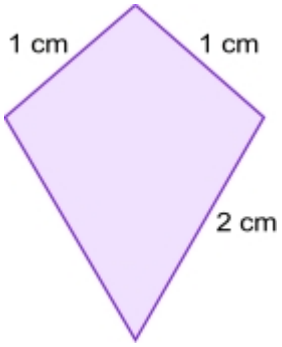
PART 1. MATHEMATICAL TERMS

NO.	TERMS	UNITS	DEFINITIONS	VIETNAMESE TRANSLATIONS
1	**equivalent decimal**	8.1		
2	**recurring decimal**	8.1		
3	**terminating decimal**	8.1		
4	**fraction**	8.2		
5	**cancelling**	8.3		
6	**common factor**	8.3		

7	**strategies**	8.5		
8	**linear sequence**	9.1		
9	**non-linear sequence**	9.1		
10	**quadratic sequence**	9.2		
11	**linear function**	10.2		
12	**gradient**	10.3		
13	***x*-intercept**	10.3		
14	***y*-intercept**	10.3		
15	**ratio**	11.1		
16	**direct proportion**	11.2		
17	**inverse proportion**	11.2		

PART 2. EXERCISES

Question 1



Use the properties of a kite to find the length of the unmarked side.

[ ] cm

Question 2

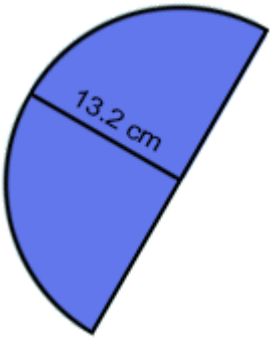
What is the circumference of a circle with radius 4 cm?

Give your answer to 1 decimal place.

[ ] cm

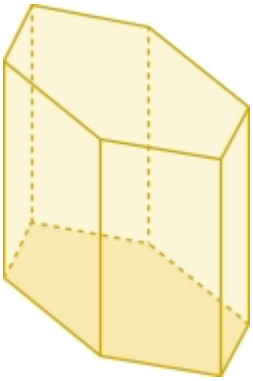
Question 3

Calculate the perimeter of this semicircle correct to 1 decimal place.



[ ] cm

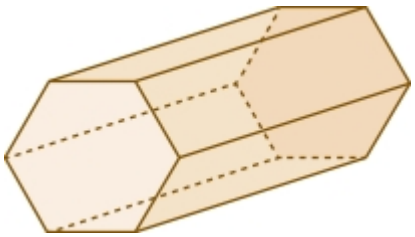
Question 4



How many vertices does this solid have?

[ ]

Question 5



This solid has ☐ faces.

Question 6

4, $4\frac{2}{3}$, $5\frac{1}{3}$, 6, $6\frac{2}{3}$, ...

Enter numbers to complete the term-to-term rule for this sequence.

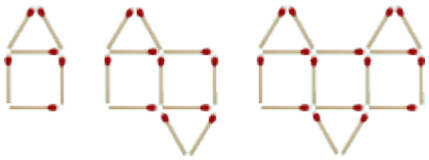
add $\frac{\square}{\square}$

Question 7

Enter the missing term.

$\frac{4}{12}, \frac{5}{12}, \frac{6}{12}, \frac{\square}{\square}, \frac{8}{12}$, ...

Question 8



The position-to-term rule for this patterns is:

Term = ☐ × position number + ☐

Question 9

18, 16, 14, 12, 10, ...

Find the position-to-term rule for this sequence.

Term = ☐ × position number + ☐

Question 10

The nth term of this pattern is $2n$.

What is the 30th term?

30th term = ☐

Question 11

What is the third term of the sequence with nth term $7n - 5$?

[ ]

Question 12

Position number	1	2	3	4
Term	2	6	10	14
Multiples of 4	4	8	12	16

What is the nth term rule of this sequence?

Term = [ ] n – [ ]

Question 13

$y = 3x - 7$

When the input is 4, what is the output of the function?

Output = [ ]

Question 14

$y = x \div 2 + 1$

When the input is 5, what is the output of the function with this equation?

Output = $3\frac{[\ ]}{2}$

Question 15

Games and books can be downloaded onto a tablet.

Games cost $5 and books cost $3.

How much would it cost to download five books and two games?

$[ ]

Question 16

Eleni is x years old. Her brother is five years older than her.

How old is Eleni's brother when she is 12 years old?

[ ] years old

Question 17

A necklace has five more red beads than twice the number of blue beads.

The necklace has eight blue beads.

How many red beads does it have?

☐ red beads

Question 18

A straight line has equation y = – 4x + 9. What is the value of y when $x = -3$?

☐

Question 19

The line y = 7 – 3x goes through the point (6, a). What is the value of a?

☐

Question 20

The constant term in equation $y = 7x + 4$ is ☐.

Question 21

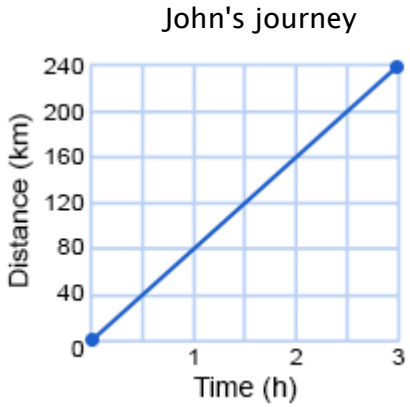
The gradient of the line $y = -5x - 3$ is ☐.

Question 22

What is the y–intercept of $y = 2 - 4x$?

y–intercept = ☐

Question 23

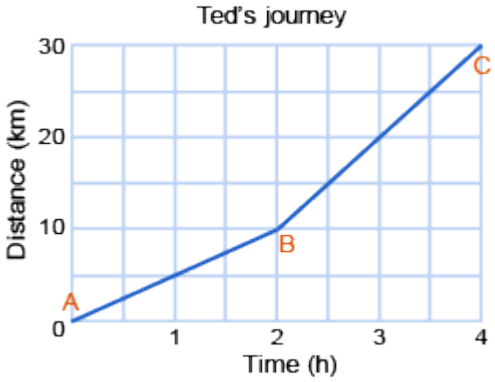


What distance has John travelled in three hours?

Distance travelled in three hours = ☐ km

Question 24

What is Ted's speed for the first part of his journey?



Ted's speed = ☐ km/h

Question 25

Sean earns $103.80 for 12 hours work.

What is his rate of pay?

$☐/h

Question 26

On a school excursion the teacher to learner ratio is 1 : 15.

If 165 learners are going on the excursion, how many teachers are needed?

Number of teachers = ☐

Question 27

A 50 m length of pipe is cut in the ratio 3 : 2. What is the length of the longer piece?

☐ m

Question 28

The amount of hay in a barn will feed 40 cows for 12 weeks.

For how many weeks could you feed 15 cows with the same amount of hay?

☐ weeks

Question 29

Sally is travelling at an average speed of 72 km/h and takes 4 h 12 min to travel from A to B.

How long would the same journey take if the average speed was increased to 80 km/h?

Answer to the ***nearest minute***.

The journey would take ☐ hours ☐ minutes.

Question 30

A recipe for lemon iced tea requires the juice of one lemon for every 1 litre of chilled tea. Assuming that there is about 50 ml of juice in each lemon, how many litres of iced tea can be made from 15 lemons?

☐ litres
