

**V/ Vavuniya Tamil Madya Maha Vidyalayam - 2018**  
**First Term Examinations**

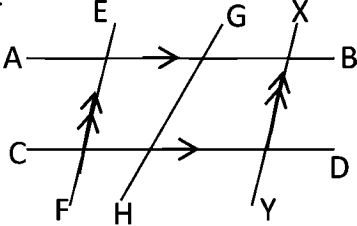
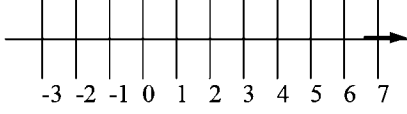
**Grade: 8**

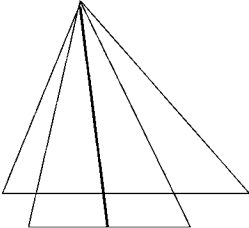
**Mathematics**

**Time: 2hrs. 30min.**

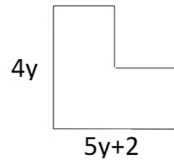
**Part I**

**Answer all the questions in the question paper itself.**

1. When 1kg of sugar was Rs.120, Mala bought 0.5kg of sugar giving Rs.100. How much money should she get as the balance?	2. Write in words: $\frac{x}{3} + 4$
3. Simplify: $6 + (-4) + (-5)$	4. Simplify: $0.24 + 1.3$
5. Write two pairs of parallel lines from the given diagram. 	6. Find the value of $4 - (-2)$ using number line. 
7. Remove brackets: $4(2x - 3)$	8. Evaluate: $\sqrt{484}$
9. Find the LCM of 5, 8 and 15.	10. Remove brackets and simplify: $5(3a + 2b) + 2(2a - b)$

<p>11. What is the supplementary angle of <math>108^{\circ}</math>?</p>	<p>12. Write <math>4.25t</math> in kg.</p>
<p>13. Evaluate: <math>\sqrt{27} \times \sqrt{12}</math></p>	<p>14. Find the HCF of 16, 36 and 72.</p>
<p>15. Factorize: <math>2x^2 - 50</math></p>	<p>16. Fill in the blank:</p> $\frac{\square}{(-3)} = (-8)$
<p>17. For a dodecahedron</p> <p>i. What is the shape of one face?</p> <p>ii. What is the number of edges?</p>	<p>18. How many triangles are there in the given figure?</p> 

19. Find the perimeter of the given figure.

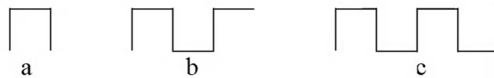


20. Write in ascending order:  $\frac{9}{2}, \frac{5}{8}, \frac{1}{12}, \frac{3}{100}, \frac{1}{5}$

### Part - II

Answer five questions including the first one.

1. The following figures show how some sticks were arranged for an assessment activity:



- i. How many sticks are there in each of the figures?
- ii. Draw the next shape of this pattern.
- iii. Write the first five terms of the number pattern of the number of sticks in these figures.
- iv. Multiples of which number is this number pattern? What is the general term of this pattern?
- v. Find the 15<sup>th</sup> term of this pattern.
- vi. Which term is 372 in the number pattern?
- vii. Which is the smallest multiple of three, which is greater than 200? Which term is it in the number pattern?
- viii. Karthi saved money in the pattern that he saved Rs.1 on the 1<sup>st</sup> day, Rs.2 on the 2<sup>nd</sup> day, Rs.3 on the 3<sup>rd</sup> day and so on. How much money would he save in 15 days?

(8x2 = 16)

2.

i. Find the perimeter of the figure 1.

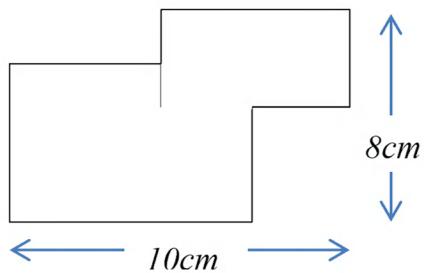


Fig. 1

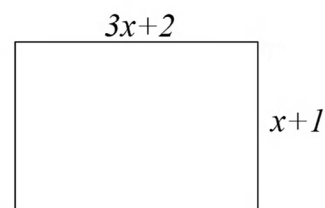


Fig. 2

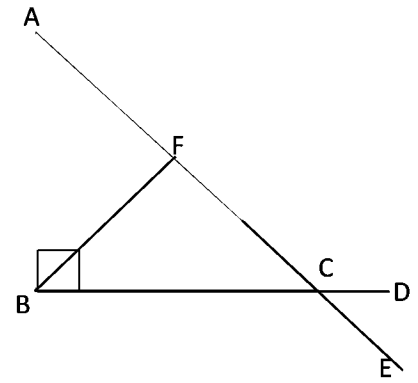
ii.

- a. Write the area of the rectangle in figure 2 as an algebraic expression and give your answer in its simplest form.
- b. If its perimeter is 78cm, then find the value of x.
- c. Find its length and breadth.
- d. Find its area.

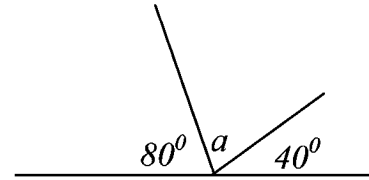
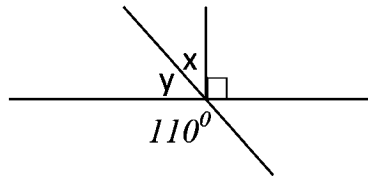
$$(3+4x^2 = 11)$$

3.

- i. In the given diagram, ;
- What is the complementary angle of  $\angle ABF$ ?
  - For these two angles:
    - What is the common edge?
    - What is the common vertex?
  - What is the supplementary angle of  $\angle ACB$ ?
  - If  $\angle ACD = 130^\circ$ , find  $\angle DCE$ .



- ii. Find the angles denoted by the English alphabets in the given diagrams below:



$$(1+5 \times 2 = 11)$$

4.

- Draw a net diagram of an octahedron.
- Write the number of faces, vertices and edges of an octahedron.
- Write 4 Plato's solids.
- Write Euler's relationship.
- Using this relationship, find the number of vertices of a solid with 20 faces and 30 edges.  
 $(3+3+2+1+2 = 11)$

5. Simplify:

- $(-3) - (+2) + 4$
- $8 \div (-2)$
- $10x - 12x + 3x$
- $\frac{4 \times (-3)}{2}$
- $a(x + y + 3) + a(x + 2y + 3)$

6.

- Express 72 as a product of prime factors and then express it as a product of indices of prime factors.
- Simplify:
  - $4t \ 234\text{kg} - 970\text{kg}$
  - $3t \ 234\text{kg} \times 7$
  - $2t \ 103\text{kg} \div 3$
- If  $3t \ 262\text{kg}$  of tea was mixed with  $2t \ 903\text{kg}$  of tea and packets of tea each of the weight  $5\text{kg}$  were made from the mixture, how many packets were made?

$$(4 \times 2 + 3 = 11)$$