First Terminal Evaluation 2017-18

MATHEMATICS

Std. : VIII
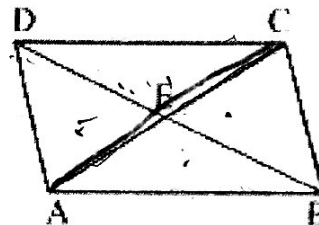
Time : 1½ hours
Total Score : 40

Instructions :

1. First 15 minutes is cool off time use it only for reading the questions well.
2. Answer only required number of questions from each section.
3. Write necessary steps.

From questions 1 to 5, answer any 4.   (4 x 2 = 8)

1. ABCD is a parallelogram.

   (a) How many triangles are there in the figure ?

   (b) Write any two pairs of equal triangles.

2. If $6(x-2) = 4(x+3)$. Then find 'x'.

3. A polygon has 10 sides.

   (a) How many diagonals can be drawn from one vertex ?

   (b) Find the sum of all inner angles.

4. Select values of 'x' satisfying equations in column 1, from column 2.

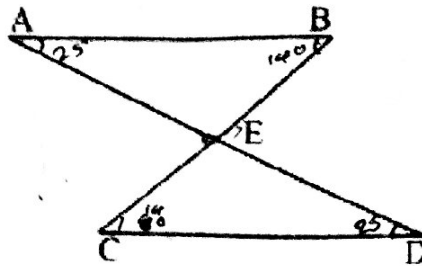 | Column 1 | Column 2 |
   |----------|----------|
   | (a) $x + 2 = 4$ | $x = 8$ |
   | (b) $x - 2 = 4$ | $x = 2$ |
   | (c) $x \times 2 = 4$ | $x = 6$ |
   | (d) $x \div 2 = 4$ | |

5. A polygon with all angles equal has 20 sides.

   (a) What will be the measure of one of its outer angle ?

   (b) What will be the measure of one of its inner angle?

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6.   In figure AB and CD are parallel. Write any 3 pairs of equal angles from it.


7.   The length of a rectangle is 1 cm greater than breadth.
   (a)   If breadth is taken as x, find length.
   (b)   If the perimeter is 50 c.m find length and breadth.

8.   In a regular polygon, one of its inner angle is 3 times outer angle.
   (a)   What is the sum of inner and outer angles of any polygon.
   (b)   How many sides are there for this polygon ?

9.   5 added to 3 times a number equals 3 substracted from 5 times that number. What is that number ?

10.   In figure PQ is parallel to RS. Find the outer angles at vertices Q and S.
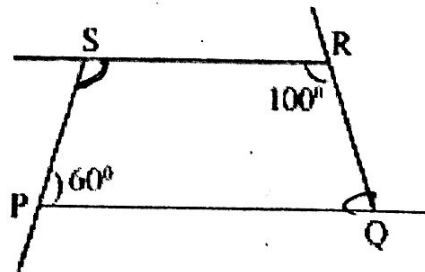
11.   AB = 5 c.m, $\angle A = 28\frac{1}{2}^\circ$, $\angle B = 38\frac{1}{2}^\circ$. Draw $\triangle$ ABC with these measures.

12.   Draw a line segment of length 9 c.m and bisect it. Divide it in to two parts with lengths 6¾ c.m and 2¼ c.m.

13.   A hundred rupee note was changed in to 5 Rs. notes and 20 Rs. notes. If there are 11 notes in total. Find the number of each type of notes.

14.   In figure O is the centre of circle.
      If angle A = 32°. Find all angles of triangle ABC.
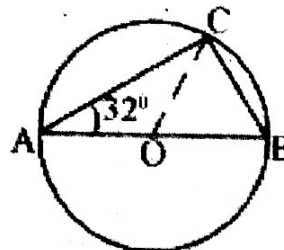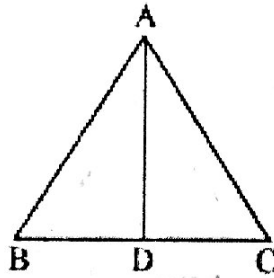
15. Sum of inner angles of a polygon is 1080°.

    (a)   How many sides are there ?

    (b)   Can the sum of angle be 1000°? Why ?

From questions 16 to 18 answer any two.   **(2 x 4 = 8)**

16.   In $\triangle ABC$, $AB = AC$. Also AD is the angle bisector of angle A. Show that triangle ABD and triangle ADC are equal. Also prove that AD is perpendicular to BC.

17.   Ajayan is 10 years elder than Vijayan. Next year Ajayans age will be double the age of Vijayan. Find their present age. (Take present age of vijayan as x).

18.   ABCDE is a regular pentagon. Show that triangle ACD is isosceles.