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Devi Balika Vidyalaya - Colombo 8

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First Term Test - 2012

Mathematics

Grade 8

1 1/2 hour

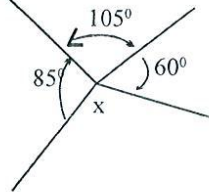
* Answer all the questions on this paper itself.

- 01) It was needed five buses to go on an educational tour. Three buses each containing 48 students and two buses each containing 40 students joined the trip. Find the total number of students who participated on the trip.

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- 02) Find the magnitude of x

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- 03) Remove the brackets and simplify.

$2(x - 1) - (x + 3)$

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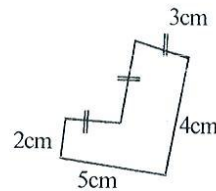
- 04) Factorise, $ap^2 - ap - a$
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- 05) Which term is 98 in the number pattern 2, 4, 6, 8, ?

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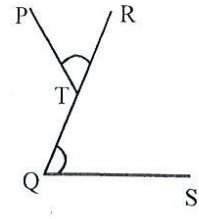
- 06) Find the perimeter of the figure given below.

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- 07) i) Find the value of the complement of 89°
- ii) Find the value of the supplement of 79°

08) A student says that \hat{PTR} and \hat{RQS} are not a pair of adjacent angles. Is it true or false ? Give reasons for your answer.



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09) Simplify, $(-3 \cdot 5) - (-5 \cdot 2)$

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10) Name a solid object which can be used to make an octahedron. How many such solid objects are required to make an octahedron ?

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11) Simplify, $1 \frac{1}{5} - \frac{3}{8}$

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12) If $676 = 2^2 \times 13^2$, find the square root of 676

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13) Write the special name for the solid objects of which all the faces have same kind of regular shapes.

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14) Find $\sqrt{256}$ using prime factors.

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15) Simplify, $5.678 + 56.78 + 567.8$

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16) The general term of a number pattern is $8 - 3n$. Write the first two terms of the pattern.

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17) Thamara spent 1 hour and 40 minutes to come to school. If she left home at 6.45, find the time that she reached school.

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18) Simplify, $10 \text{ t } 400 \text{ kg} \div 4$

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19) Find the difference between the 8th triangular number and the 8th square number.

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20) Mass of a three wheeler is 1.5 t Mass of a truck which carries five such three wheelers is 18.75 mt. Find the mass of the truck.

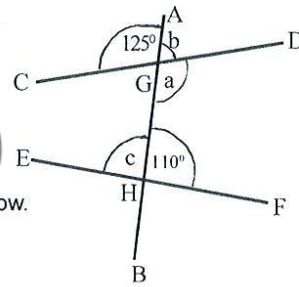
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Part - II

* Answer all the questions.

- 01) The perimeter of a square is 48 cm
- Find the length of a side of the square
 - Find the length of a side of an equilateral triangle having the same perimeter, as that of the square.
 - If the length of a rectangle having the same perimeter as that of the square is 15 cm, find the breadth of it.
 - Find the area of the above mentioned rectangle.

- 02) The straight lines CD and EF are intersected by the transversal AB at G and H respectively.



- According to the diagram answer the questions given below.
 - Name a pair of corresponding angles
 - Name a pair of alternate angles
 - Name a pair of allied angles
 - Name an angle which is vertically opposite to \hat{BGD}
- Find the magnitudes of a , b and c separately.

- 03) Simplify ,

- $(-8) + (+2) + (-3)$
- $(-6) - (-3)$ (Simplify using a number line)
- $\frac{(-12) \times (4)}{(-3) + (5)}$
- $(-3 \frac{1}{4}) - (+6 \frac{1}{2})$

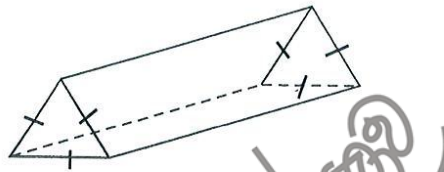
- 04) a) Simplify ,

- $2x + 3y + 5x - 7y$
- $3(x - y - z) + 5z$ (Remove the brackets and simplify)

- b) when $x = 2$ and $y = (-3)$ find the value of $2xy^2 + y$

- c) Cost of a pencil box is Rs. x , Cost of an exercise book is Rs. y and cost of a pen is Rs. z
- Express the total cost of a pencil box, an exercise book and 2 pens as an algebraic expression.
 - It is needed to buy five equal parcels each containing the things mentioned in part (i). Build up an algebraic expression for the expense of the above parcels with brackets.

05) algebraic expression with brackets for the expense of that.



- 05) i) Name the solid object represented in the above figure.
- ii) Write the number of edges, vertices and faces of it separately.
- iii) Write the number of edges, vertices and faces of a tetrahedron separately.
- iv) A new solid object is constructed by fixing a face of a tetrahedron so as to coincide a triangular face of the above solid object. According to the new solid object.
- find the number of edges, vertices and faces separately.
 - verify whether Euler's relation is true for this solid object.