

Subject Code

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**STATE LEVEL ASSESSMENT(SA-1)**

**Session 2019 - 20**

**Class – 7**

Subject: Mathematics English Medium (CBSE)

Time: 02:30 Hours

Total Marks

|   |   |
|---|---|
| 4 | 0 |
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Student ID 

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Name of the Student \_\_\_\_\_ Name  
of the School \_\_\_\_\_

Obtained Marks (in figures) 

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Signature of the Head Master \_\_\_\_\_

Signature of the Invigilator \_\_\_\_\_

| Only for Valuation Purpose |  |  |  |  |  |  |            |  |  |  |
|----------------------------|--|--|--|--|--|--|------------|--|--|--|
| STUDENT CODE               |  |  |  |  |  |  | PAPER CODE |  |  |  |
|                            |  |  |  |  |  |  |            |  |  |  |

| 1                                      | 10 | Signature and Seal of Centre Superintendent |  |  |  | Signature of Valuer |  |  |  |
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| 2                                      | 11 |   |  |  |  |                     |  |  |  |
| 3                                      | 12 |   |  |  |  |                     |  |  |  |
| 4                                      | 13 |   |  |  |  |                     |  |  |  |
| 5                                      | 14 |   |  |  |  |                     |  |  |  |
| 6                                      | 15 |   |  |  |  |                     |  |  |  |
| 7                                      | 16 |   |  |  |  |                     |  |  |  |
| 8                                      | 17 |   |  |  |  |                     |  |  |  |
| 9                                      |    | Date:                                       |  |  |  | Date:               |  |  |  |
| कुलप्राप्तंक<br>(Total Marks Obtained) |    |   |  |  |  |                     |  |  |  |

**Instructions:-**

1. All Questions are compulsory.
2. Answers of each question are to be written on this sheet only.
3. Question Number 1 to 5 carries 1 marks each, Question Number 6 to 10 carries 2 marks each, Question Number 11 to 15 consists of 3marks each and Question Number 16 & 17 carries 5 Marks each.

Q.1 Complete the pattern -2, -4, -6, -8,

1

- a) -9 b) 10 c) -10 d) -7

Ans. c) -10

Q.2  $5\frac{1}{6} \div \frac{9}{2} =$

1

- a)  $\frac{62}{58}$  b)  $\frac{31}{27}$  c)  $\frac{31}{9}$  d)  $\frac{62}{18}$

Ans. b)  $\frac{31}{27}$

Q.3 The complementary angle of  $65^{\circ}$  is.....

1

- a)  $25^{\circ}$  b)  $115^{\circ}$  c)  $90^{\circ}$  d)  $180^{\circ}$

Ans. a)  $25^{\circ}$

Q.4 4% of 62 is.....

1

- a) 6.2 b) 2.48 c) 12.4 d) 1.55

Ans. b) 2.48

Q.5 The standard form of  $\frac{-45}{30}$  is.....

1

- a)  $\frac{3}{2}$  b)  $\frac{-3}{-2}$  c)  $\frac{-3}{2}$  d)  $\frac{15}{10}$

Ans. c)  $\frac{-3}{2}$

Q.6 Find product of  $(-12) \times (-11) \times (-10)$

2

Ans.  $(-12) \times (-11) \times (-10)$   
 $\Rightarrow 132 \times -10$   
 $\Rightarrow -1320$

Q.7 Express as rupees using decimal

2

Ans. 7Rs. and 7paise = 7.07paise

Q.8 Solve the equation  $\frac{3p}{4} = 6$

2

Ans.  $\frac{3p}{4} = 6$

$$\Rightarrow 3p = 6 \times 4 = 24$$


$$\Rightarrow P = \frac{24}{3} = 8 = \text{Answer}$$

Q.9 Draw two parallel lines.

2

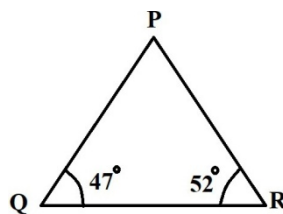
Ans.



Q.10 In the given figure find P 

2

Ans.



We know that,

Sum of interior angles of a triangle =  $180^\circ$

So, in  $\triangle PQR$   $\angle P + \angle Q + \angle R = 180^\circ$

$$\Rightarrow \angle P + 47^\circ + 52^\circ = 180^\circ$$

$$\Rightarrow \angle P + 99^\circ = 180^\circ$$

$$\Rightarrow \angle P = 180^\circ - 99^\circ = 81^\circ = \text{Answer}$$

Q.11 What is Arithmetic mean? Give example.

3

Ans. The average or Arithmetic Mean (A.M.) or simply mean is defined as follows:

$$\text{Mean} = \frac{\text{Sum of all observations}}{\text{number of observations}}$$

Example: The mean of the series 2,3,4,5,6 would be

$$\text{Mean} = \frac{2+3+4+5+6}{5} = 20/5 = 4 = \text{Answer}$$

—

Q.12

Raju's father's age is 5 years more than three times Raju's age.

3

Ans. Find Raju's age if his father is 44 years old.

Let Raju's age be x

Raju's father age = 44

According to the Question,

$$3x+5=44$$

$$\Rightarrow 3x=44-5$$

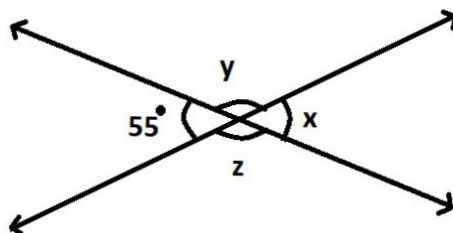
$$\Rightarrow x=39/3$$

$$\Rightarrow x=13$$

Thus, Raju's age is 13 yrs.

Q.13 Find the values of angle x, y, z in the figure

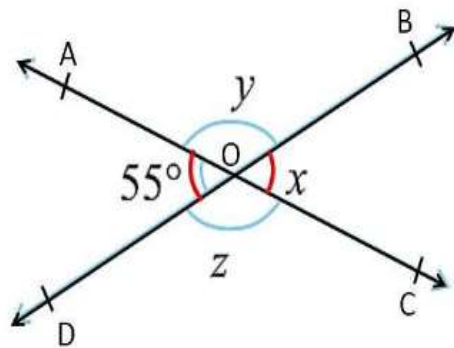
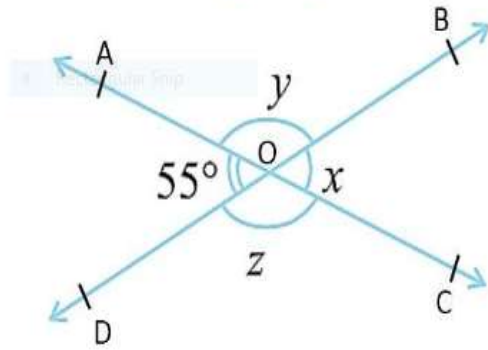
3



Find the values of the angles  $x$ ,  $y$ , and  $z$  in each of the following:

Ans.

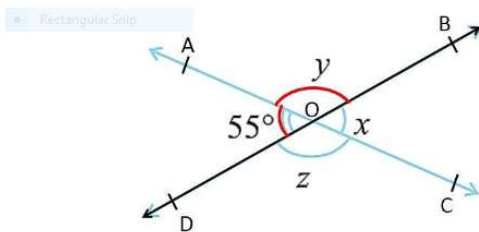
(i)



Here,

$$\angle BOC = \angle AOD \quad (\text{Vertically opposite angles})$$

$$x = 55^\circ$$



$$\angle AOB = \angle COD \quad (\text{Vertically opposite angles})$$

$$y = z$$

$$125^\circ = z$$

$$z = 125^\circ$$

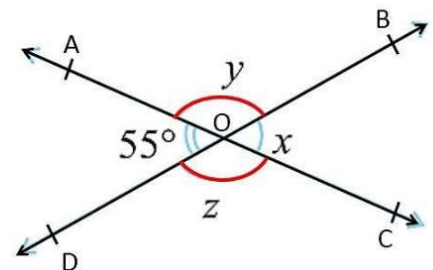
Now, BD is a line

$$\angle AOD + \angle AOB = 180^\circ \quad (\text{Linear pair})$$

$$55^\circ + y = 180^\circ$$

$$y = 180^\circ - 55^\circ$$

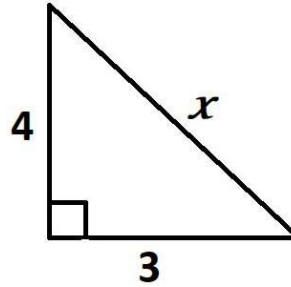
$$y = 125^\circ$$



Q.14

3

Find the length of x in the figure



Ans. By PGT,

$$\text{Hypo}^2 = \text{Perp.}^2 + \text{Base}^2$$

$$\Rightarrow X^2 = 4^2 + 3^2$$

$$\Rightarrow X^2 = 16 + 9$$

$$\Rightarrow X^2 = 25$$

$$\Rightarrow X = 5 = \text{Answer}$$

Q.15 Find the additive inverse of  $\frac{-3}{9}$ 

3

$$\text{Ans. } \frac{-3}{9} + \frac{3}{9} = 0$$

Q.16 Represent the data by Bar diagram and then compare the prices.

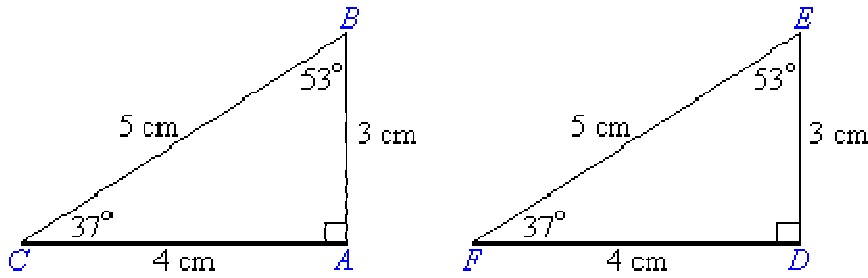
5

| Item  | Rent | Cloth | Medicine | Electric |
|-------|------|-------|----------|----------|
| Price | 1000 | 900   | 200      | 300      |

Ans.



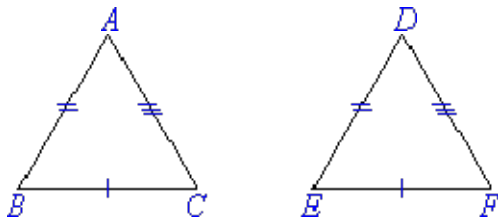
**Congruent triangles** have the same size and the same shape. The **corresponding sides** and the **corresponding angles** of congruent triangles are equal.



If we place  $\triangle ABC$  over  $\triangle DEF$  we will find that they cover each other exactly. Thus Vertex A will be covered by Vertex D, C by F and B by E. These triangles will therefore be called Congruent Triangles.

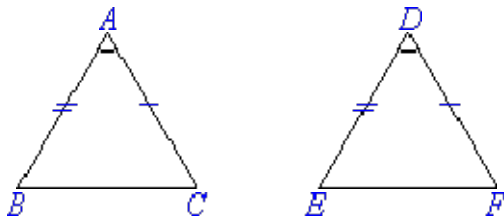
### 1. The side-side-side (SSS) principle

Two triangles are congruent if corresponding sides are equal.



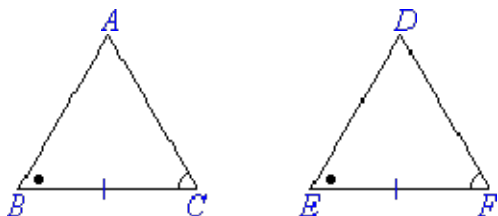
### 2. The side-angle-side (SAS) principle

Two triangles are congruent if two pairs of corresponding sides and the angle included between the sides are equal.



### 3. The angle-side-angle (ASA) principle

Two triangles are congruent if two pairs of corresponding angles and a pair of corresponding sides are equal. Angle B has been denoted by a bold dot and angle C by angle mark.



#### 4. The right angle-hypotenuse-side (RHS) principle

Two right-angled triangles are congruent if the hypotenuses and one pair of corresponding sides are equal.

