

# HALF YEARLY EXAMINATION, 2017-18

## MATHEMATICS

Time : 3 hrs.

Class - VII

M.M. : 80

Date – 11.09.2017 (Monday)

Name of the student \_\_\_\_\_ Section \_\_\_\_\_

### General Instructions –

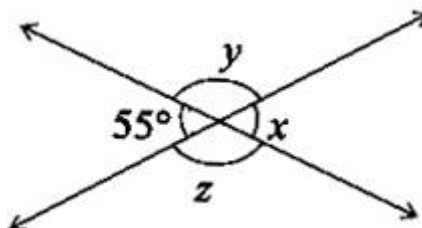
- This section is divided into **four sections A , B , C and D.**
- Section **A** comprises **6** questions of **1** mark each . All are compulsory .
- Section **B** comprises **6** questions of **2** marks each. All are compulsory .
- Section **C** comprises **12** questions of **3** marks each . Attempt any **10** questions.
- Section **D** comprises **9** questions of **4** marks each . Attempt any **8** questions.
- Draw neat diagrams wherever necessary.
- Show the required calculations in fair.

### SECTION-A (Attempt all questions)

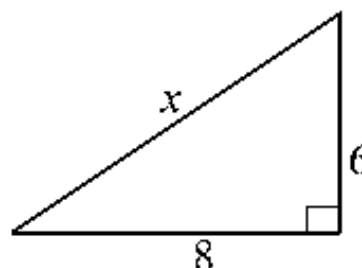
- Q.1** \_\_\_\_\_ is the additive identity for integers.
- Q.2** Find  $\frac{2}{3}$  of 18.
- Q.3** Write equation for “2 subtracted from y is 8”.
- Q.4** What is the measure of the complement of  $65^\circ$ .
- Q.5** The sum of the three angles of a triangle is \_\_\_\_\_.
- Q.6** A coin is thrown. Find the probability of getting a head.

### SECTION - B (Attempt all questions)

- Q.7** Write down a pair of integers whose sum is -10.
- Q.8** A two wheeler covers a distance of 55.3 km in one litre of petrol. How much distance will it cover in 10 litres of petrol?
- Q.9** Write the equation  $\frac{p}{8} + 2 = 10$  in statement form.
- Q.10** Find the values of the angles  $x$ ,  $y$  and  $z$  from the figure



- Q.11** Find the value of the unknown  $x$  from the given figure



**Q.12** A cricketer scores the following runs in seven innings :

58, 76, 40, 35, 46, 45, 100

Find the median.

**SECTION-C (Attempt any 10 questions)**

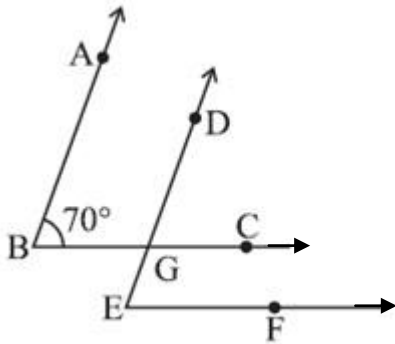
**Q.13** A rectangular sheet of paper is  $12\frac{1}{2}$  cm long and  $10\frac{2}{3}$  cm wide. Find its perimeter.

**Q.14** In an isosceles triangle, the base angles are equal. The vertex angle is  $40^\circ$ . What are the base angles of the triangle?

**Q.15** In the given figure, the arms of two angles are parallel.

If  $\angle ABC = 70^\circ$ , then find

$\angle DGC$  and  $\angle DEF$



**Q.16** AM is a median of a  $\triangle ABC$

Show that  $AB + BC + CA > 2AM$

**Q.17** An elevator descends into a mine shaft at the rate of 6 m/min. If the descent starts from 10m above the ground level, how long will it take to reach  $-350$  m.

**Q.18** Solve the equation

$$4 + 5(p - 1) = 34$$

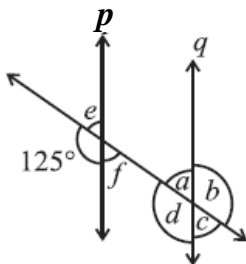
**Q.19** Express in decimals:

a) 77 Rs 77 Paise

b) 4 kg 8g

c) 5m 5 cm

**Q.20**



In the adjoining figure, p is parallel to q. Find the unknown angles.

**Q.21** If  $\triangle DEF \cong \triangle BCA$ , write the parts of  $\triangle BCA$  that correspond to

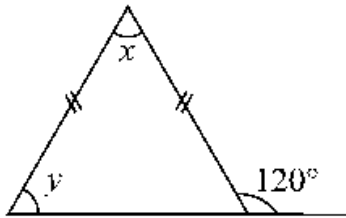
a)  $\angle E$  b) EF c)  $\angle F$  d) DF e)  $\angle D$  f) DE

**Q.22** The marks obtained by a group of students in Maths test are 85, 76, 90, 85, 39, 48, 56, 95, 81 and 75. Find the

i) Range of the marks obtained.

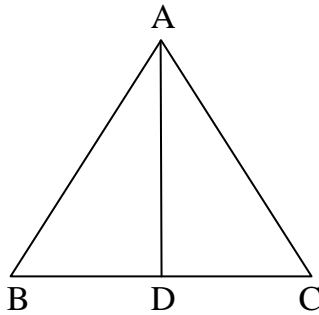
ii) Mean marks obtained by the group

**Q.23** Find angles  $x$  and  $y$



**Q.24** In the given fig  $AB = AC$  and  $D$  is the mid point of  $BC$ .

- State the three pairs of equal parts in  $\triangle ADB$  and  $\triangle ADC$
- Is  $\triangle ADB \cong \triangle ADC$  ? Give reason for your answer.



**SECTION-D (Attempt any 8 questions)**

**Q.25** In a class test containing 15 questions, 4 marks are given for every correct answer and  $(-2)$  marks are given for every incorrect answer.

- Gurpreet attempts all questions but only 9 of her answers are correct. What is her score?
- Rashmi attempts all questions but gets only 5 answers correct. What will be her score?

**Q.26** The marks of quarterly (out of 50) and half yearly (out of 50) exams of five students are given below:

Students	Ashish	Arun	Kavish	Maya	Rita
Quarterly	20	30	24	40	18
Half yearly	30	36	32	42	30

Draw a double bar graph choosing appropriate scale.

**Q.27** Which is greater?

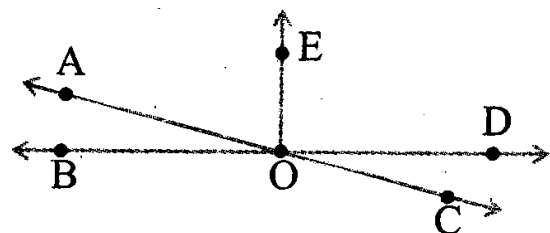
$$\left(\frac{1}{2} \text{ of } \frac{6}{7}\right) \text{ or } \left(\frac{2}{3} \text{ of } \frac{3}{7}\right)$$

**Q.28** Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.

**Q.29** Find the perimeter of the rectangle whose length is 40 cm and a diagonal is 41 cm.

**Q.30** In the adjoining figure name the following pairs of angles.

- Obtuse vertically opposite angles
- Adjacent complementary angles
- Equal supplementary angles.
- Unequal supplementary angles.



**Q.31** ABCD is a quadrilateral. Show that :  $AB + BC + CD + DA > AC + BD$

**Q.32** Vipin, a class VII student received cash award of Rs 5000. He has made a budget plan for spending this amount

Sl.No.	Head	Amount (in Rs.)
1	Donation in temple	150
2	Tuition fee to needy child	200
3	Welfare of senior citizens	300
4	Welfare of street children	300
5	Saving in bank	1500
6	Books for family library	500
7	Picnic for family	650
8	Gift to grand parents	600
9	Tea party to friends	800
	<b>Total</b>	<b>5000</b>

- Find mode and median of above distribution of money
- Which values are depicted in his plan?

**Q.33** BD and CE are altitudes of  $\triangle ABC$  such that  $BD = CE$ .

- State the three pairs of equal parts in  $\triangle CBD$  and  $\triangle BCE$
- Is  $\triangle CBD \cong \triangle BCE$ ? Why or why not?
- Is  $\angle DCB = \angle ECB$ ? Why or why not?

