



Department of Education, CTA, Dharamsala

Selection Test Paper

Time : 2 hours

Class VIII

Mathematics

Maximum Marks : 80

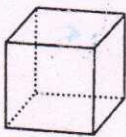
General Instructions:

1. All questions are compulsory. Marks are indicated against each section.
2. This question paper is divided into four sections, namely, **Section A, B, C** and **D**.
3. Section A is a *Multiple Choice Questions*. Each question carries 1 mark. You are to select one most appropriate response out of the four provided to you.
4. Use of calculator is not allowed.

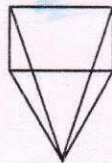
Section A (1 × 10 = 10 Marks)

Multiple Choice Questions:

1. A number which can be expressed as $\frac{p}{q}$ where p and q are integers and $q \neq 0$ is
(a) Natural number (b) Whole number
(c) Integer (d) Rational number
2. The reciprocal of -1 is
(a) 1 (b) -1 (c) 0 (d) Not defined
3. Data represented using circles is known as
(a) Bar graph (b) Histogram (c) Pie graph (d) Pictograph
4. Which of the following numbers is not a perfect square?
(a) 361 (b) 1156 (c) 1128 (d) 1681
5. Which amongst the following is not a polyhedron?



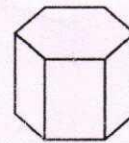
(a)



(b)



(c)



(d)

6. If three angles of a quadrilateral are each equal to 75° , the fourth angle is
(a) 150° (b) 135° (c) 45° (d) 75°
7. The sum of $-7pq$ and $2pq$ is
(a) $-9pq$ (b) $9pq$ (c) $5pq$ (d) $-5pq$

8. The point which lies on both the axis is
 (a) (0, 1) (b) (0, 0) (c) (1, 0) (d) (1, 1)
9. Which of the following is a binomial?
 (a) $7 \times a + a$ (b) $6a^2 + 7b + 2c$ (c) $4a \times 3b \times 2c$ (d) $6(a^2 + b)$
10. 3^{-2} can be written as
 (a) 3^2 (b) $\frac{1}{3^2}$ (c) $\frac{1}{3^{-2}}$ (d) $-\frac{2}{3}$

Section B (1 × 10 = 10 Marks)

Fill in the blanks to make the statements true: (5 Marks)

11. Zero has _____ reciprocal. (no / few / 5)
12. The range of the data 6, 8, 16, 22, 8, 20, 7, 25 is _____. (6 / 19 / 25)
13. The cube of an odd number is always an _____ number. (even / odd / off)
14. Common factor of $ax^2 + bx$ is _____. (a / b / x)
15. The solution of the equation $3x - 4 = 1 - 2x$ is _____. (1 / -1 / 3)

State whether following statements are true (T) or false (F): (5 Marks)

16. Sum of all the angles of a quadrilateral is 180° . ()
17. The value of $(-2)^0$ is 2. ()
18. All rectangles are parallelograms. ()
19. Every fraction is a rational number. ()
20. The cube root of 8000 is 200. ()

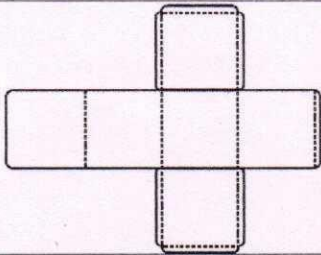
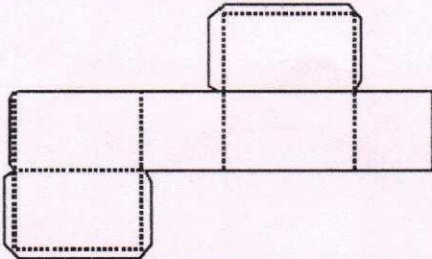
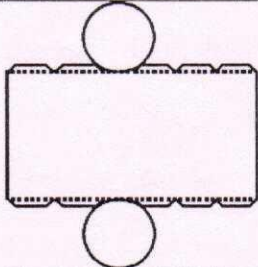
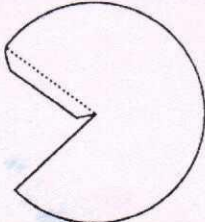
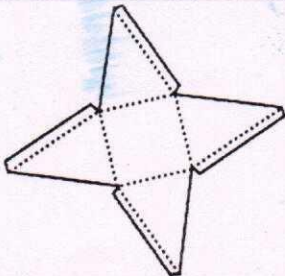
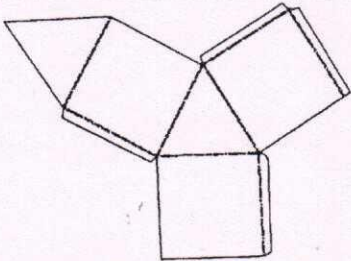
Section C (4 × 6 = 24 Marks)

21. The product of two rational numbers is $\frac{-14}{27}$. If one of the number is $\frac{7}{9}$, find the other.
22. Find the square root of 4761 and cube root of 1728.
23. Solve the equation: $\frac{9-3y}{1-9y} = \frac{8}{5}$
24. Construct a parallelogram ABCD in which AB = 5 cm, BC = 4 cm and $B = \angle 60^\circ$.
25. Factorise the following using identities:
 (a) $x^2 + 12x + 36$ (b) $4x^2 - 25y^2$
26. Pema can type 108 words in 6 minutes. How many words would she type in half an hour?

Section D

(6 × 6 = 36 Marks)

27. Identify the nets given below and mention the name of the corresponding solid in the space provided:

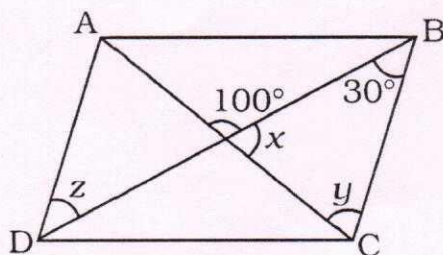
S. No.	Nets	Name of Solid
(a)		
(b)		
(c)		
(d)		
(e)		
(f)		

28. The present age of father is four times the age of his son. After 10 years, age of father will become three times the age of his son. Find their present ages.

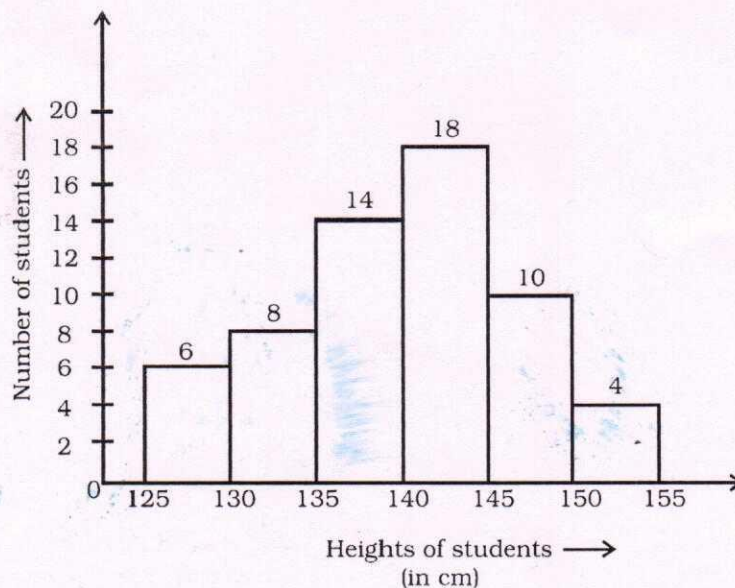
OR

The number of boys and girls in a class are in the ratio 5:4. If the number of boys is 9 more than the number of girls, then number of boys is 9.

29. The dimensions of a store house are 40 m, 25 m and 10 m. Find the number of cuboidal boxes each of having dimensions $2\text{ m} \times 1.25\text{ m} \times 1\text{ m}$ can fill the store house?
30. A wrist watch worth ₹5,400 is offered for sale at ₹4,500. What per cent of discount is offered during the sale?
31. ABCD is a parallelogram. Find the value of x , y and z .



32. Look at the histogram below and answer the questions that follow.



- (a) How many students have height more than or equal to 135cm but less than 150cm?
- (b) Which class interval has the least number of students?
- (c) Which class interval has the most number of students?
- (d) What is the class size?
- (e) How many students have height less than 140 cm?
- (f) What is the class mark of interval 125 – 130?