



ASIA ENGLISH SCHOOL		1 st Term Exam September 2009-10
Secondary /Higher Secondary Section		Date : 14-09-09
Asia Campus, Drive-in Road, Ahmedabad-380054		Time : 2 hrs.
Std : VIII	Sub : Maths	Total Marks : 50

Roll No. _____

SECTION – A

Fill in the blanks

[5]

- (1) $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$ _____ Q $??, ?, ?$
- (2) _____ does not have multiplicative inverse
- (3) If $a > b$ and $c < d$, then $a + c$ _____ $b + d$ $??, ?$
- (4) $3^{21} \times 3^{21} = ?$ _____
- (5) By selling an item at Rs. 261 with purchase price Rs.290 there is loss of _____ %

SECTION – B

Choose the correct option for the following questions

[6]

- (6) Which of the following is an undefined term _____
[a] angle [b] space [c] line [d] ray
- (7) Which of the following is an empty set ?
[a] {a} [b] {0} [c] {} [d] ?
- (8) Which of the following is an irrational number ? _____
[a] 0.123123..... [b] $0.12\bar{3}$ [c] 0.123 [d] 0.123479...
- (9) If $a > b$ and $b > c$ then _____
[a] $a > c$ [b] $a < c$ [c] $a = c$ [d] $a < ? c$
- (10) Which postulate of equality is if $a = b$ and $b = c$, then $a = c$? _____
[a] Reflexivity [b] Symmetry [c] Transitivity
- (11) If by selling an item for Rs. 275.10% profit is earned, then what is its cost price ?
[a] 520 [b] 250 [c] 205 [d] 502

SECTION – C

Answer the following.

[18]

- (12) If $A = \frac{x}{x}$ is a multiple of 10 } $B = \frac{x}{\text{the unit's digit of } x \text{ is not zero}}$ then find $A \square B$ and $A \square B$
- (13) Obtain 17×99 using distributive law.
- (14) Obtain $x \in R$ satisfying the following.
 $|3x + 1| = 5$
- (15) Expand $(x^{1/2} + y^{1/2})^2$
- (16) If 13% profit is earned by selling a watch at Rs.1356 then find the original price.
- (17) Expand : $\frac{a}{2} + \frac{b}{3} + \frac{1}{4}$
- (18) Using the following phrases give true mathematical statements one for each.
[a] at most five
[b] at least two
- (19) How many lines can be determined by three distinct points ? Justify your answers by drawing proper figures.
- (20) Point A corresponds to 3.5 on a line \square . Find the real numbers corresponding to the point which is 8 units from A.

(P.T.O)

SECTION – D

Answer the following

[9]

- (21) Given $D - E = F$, suppose -5.4 and 6.7 correspond to D and F respectively. If $DE = 4.5$ then find EF
- (22) Sachin sold his bat to Rahul at 10% loss. After some time Rahul sold it to Dinesh at 25% loss. If Dinesh paid Rs. 135 for the bat, then what is the purchase price for Sachin ?
- (23) Simplify : $\frac{x^{\frac{1}{3}} x^{\frac{1}{5}}}{x^{\frac{1}{2}}}$, $\frac{x^{\frac{1}{5}} x^{\frac{1}{2}}}{x^{\frac{1}{3}}}$, $\frac{x^{\frac{1}{2}} x^{\frac{1}{3}}}{x^{\frac{1}{5}}}$, x^0 ?

OR

Find the value of

$$\frac{x^a x^{a^b}}{x^b} \cdot \frac{x^b x^{b^c}}{x^c} \cdot \frac{x^c x^{c^a}}{x^a} \quad a, b, c \in Q \text{ and } x \neq 0$$

SECTION – E

Answer the following

[12]

- (24) If $\frac{1}{a} = 6$ then find the values of $a^2 = \frac{1}{a^2}$ and $a^4 = \frac{1}{a^4}$

OR

$$\frac{x^2}{2} = \frac{x}{4} = \frac{1}{3} = \frac{x^2}{2} = \frac{x}{4} = \frac{1}{3}$$

- (25) Draw the Venn-diagram showing $A = \{1, 2, 3\}$ $B = \{2, 3, 6\}$ $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ and find the following sets.
 (1) $A \cap B$ (2) $A \cup B$ (3) $A \setminus B$ (4) A^c
- (26) Obtain the point corresponding to $\sqrt{5}$ on the number line.

