

Q # 1 Choose the correct option.

$$6 \times 1 = 6$$

Sr	Questions	A	B	C	D
i.	If the b is zero in the quadratic equation, then the quadratic equation becomes اگر دو درجی مساوات میں "بی" زیر ہو تو دو درجی مساوات بن جاتی ہے	Linear equation یک درجی مساوات	Pure Quadratic خلص دو درجی	Exponential قوت نہائی	Radical equation ریڈکل مساوات
ii.	If $a : b :: c : d$ then alternando property is	$\frac{a}{c} = \frac{b}{d}$	$\frac{a}{b} = \frac{c}{d}$	$\frac{a}{c} = \frac{c}{d}$	$\frac{a}{b} = \frac{b}{d}$
iii.	If $f: A \rightarrow B$ and the range of $f = B$ then f is called	One-one function ون ون فکشن	Into function ان ٹو فکشن	Onto function آن ٹو فکشن	One-to-one function ون ٹو ون فکشن
iv.	The distance between the centers of two congruent touching circles externally is	Of zero length	The radius of each circle	The diameter of each circle	Twice the diameter of each circle
v.	The semi-circumference and the diameter of a circle both subtend at a central angle of	90	180	270	360
vi.	The sum of the deviations of variable X from its mean is always	same	different	zero	one

Subjective Section

Q # 2 Solve all the parts

$$6 \times 2 = 12$$

i- **Solve** $(2x - \frac{1}{2})^2 = \frac{9}{4}$

حل کریں

ii- **Prove that $a : b = c : d$ if $\frac{2a+9b}{2a-9b} = \frac{2c+9d}{2c-9d}$**

ثابت کریں

iii- Resolve $\frac{x}{(x-3)^2}$ into partial fractions.

جزوی کسر میں حل کریں

iv- Find the harmonic mean of 12, 5, 8, 4

ہار مونک میں معلوم کریں

v- Define incircle with a diagram.

اندروںی دائرہ کی تصویر کے ساتھ تعریف کریں

vi- What is the difference between tangent and secant lines?

Long Questions

Q # 1. If $\sin \theta = \frac{-1}{\sqrt{2}}$ and terminal side of the angle is not in third quadrant then find the remaining trigonometric ratios.

$$\text{زاویہ تیسراے قطعہ میں نہ ہو تو باقی گلکنیاٹی نسبتیں معلوم کریں} \quad \sin \theta = \frac{-1}{\sqrt{2}}$$

Q # 2. Find m if the roots of the equation $x^2 + 7x + 3m - 5 = 0$ satisfy the relation $3\alpha - 2\beta = 4$

ایمک کی قیمت دی گئی مساوات سے معلوم کریں

Q # 3 If $A = \{ \}$, $B = P$ and $U = N$ then verify $(A \cap B)^c = A^c \cup B^c$ 4

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ثابت کریں