

**Class 10 Mathematics  
Paper 2020(Local)**

**Q1. MCQs**

1. The solution set of the equation  $4x^2 - 16 = 0$  is:  
(a)  $\{\pm 4\}$  (b)  $\{4\}$  **(c)**  $\{\pm 2\}$  (d)  $\{2\}$
2. Discriminant of the equation  $2x^2 - 7x + 1 = 0$  is:  
(a) 14 **(b)** 41 (c) 57 (d) 59
3.  $\alpha^2 + \beta^2 =$   
(a)  $\alpha^2 - \beta^2$  (b)  $(\alpha + \beta)^2$  (c)  $\alpha^2 + \beta^2 - 2\alpha\beta$  **(d)**  $(\alpha + \beta)^2 - 2\alpha\beta$
4. If  $\alpha, \beta$  are roots of equation  $2x^2 + 3x + 4 = 0$  then value of  $\frac{1}{\alpha} + \frac{1}{\beta}$  is:  
(a)  $\frac{3}{4}$  (b)  $\frac{4}{3}$  **(c)**  $\frac{-3}{4}$  (d)  $\frac{-4}{3}$
5. If  $y^2 \propto \frac{1}{x^3}$  then:  
**(a)**  $y^2 = \frac{k}{x^3}$  (b)  $y^2 = \frac{1}{x^3}$  (c)  $y^2 = x^3$  (d)  $y^2 = kx^3$
6.  $\frac{x^3+1}{(x-1)(x+2)}$  is:  
(a) A proper fraction (b) An identity  
**(c)** An improper fraction (d) A constant
7. If P and Q are disjoint sets then  $P \cap Q$  is equal to:  
(a) Q (b) P **(c)**  $\emptyset$  (d)  $\{\emptyset\}$
8. The most frequent occurring observation in a data set is called:  
(a) Median **(b)** Mode (c) Arithmetic Mean (d) Average
9.  $\frac{3\pi}{4}$  radians is equal to:  
(a)  $115^\circ$  **(b)**  $135^\circ$  (c)  $150^\circ$  (d)  $45^\circ$
10.  $\sec\theta \cot\theta =$   
(a)  $\sin\theta$  (b)  $\frac{1}{\cos\theta}$  **(c)**  $\frac{1}{\sin\theta}$  (d)  $\frac{\sin\theta}{\cos\theta}$
11. The circular region bounded by two radii and corresponding arc is called:  
(a) Circumference **(b)** Sector (c) Diameter (d) Segment
12. A circle has only one:  
(a) Secant (b) Chord (c) Tangent **(d)** Centre
13. The semi-circumference and diameter of a circle both subtend a central angle of:  
(a)  $90^\circ$  **(b)**  $180^\circ$  (c)  $270^\circ$  (d)  $360^\circ$
14. A circle which touches the three sides of a triangle internally is known as:  
(a) Circumcircle (b) E-circle **(c)** In-circle (d) Circumference
15. A line intersecting a circle is called:  
(a) Tangent (b) Chord (c) Diameter **(d)** Secant