Class IX

REVISION WORKSHEET

MCQs & ASSERTION-REASON BASED QUESTIONS

Chapters: Number Systems, Polynomials

Q1. Which of the following is not a non-terminating and repeating decimal number?

(a)	$\frac{-17}{125}$	(b)	$\frac{11}{12250}$
(c)	$3\frac{1}{8}$	(d)	$\frac{21}{625}$

Q2. The rationalizing factor of $\frac{1}{5+2\sqrt{6}}$ is-

(a)	$\sqrt{5}+2\sqrt{6}$	(b)	$-\sqrt{5}+2\sqrt{6}$
(c)	$5-2\sqrt{6}$	(d)	$-5-2\sqrt{6}$

Q3. Which of the following is a negative rational number?

(a)	$\frac{\sqrt[4]{256}}{\sqrt[3]{8}}$	(b)	$\left(2+\sqrt{3}\right)^2$
(c)	$\sqrt{125}$	(d)	$(\sqrt{3}+\sqrt{6})(\sqrt{3}-\sqrt{6})$

Q4. The product $\sqrt[3]{2} \times \sqrt[4]{2} \times \sqrt[12]{32}$ equals to

(a)	$\sqrt{2}$	(b)	2
(c)	$\sqrt[12]{2}$	(d)	$\sqrt[12]{32}$

Q5. Arrange the following irrational numbers in ascending order: $2\sqrt{3}, 3\sqrt{2}, 11\sqrt{2}, 7\sqrt{3}$

(a)	$11\sqrt{2}, 5\sqrt{3}, 3\sqrt{2}, 7\sqrt{3},$	(b)	$2\sqrt{3}, 3\sqrt{2}, 7\sqrt{3}, 11\sqrt{2}$
(c)	$11\sqrt{2}, 7\sqrt{3}, 2\sqrt{3}, 3\sqrt{2}$	(d)	$11\sqrt{2}, 7\sqrt{3}, 3\sqrt{2}, 2\sqrt{3}$

Q6. $If\ x = \frac{1}{\sqrt{7}+\sqrt{6}}$ $, then\ the\ value\ of\ x^2 + \frac{1}{x^2}\ is -$

(a)	26	(b)	1
(c)	$(13+2\sqrt{42})$	(d)	$13-2\sqrt{42}$

Q7. Which of the following is not a polynomial?

(a)	$2\sqrt{2}x^2 - 3x + 5$	(b)	$\frac{7x^5}{14x^3} + \frac{12x^6}{x^5} - 2$
(c)	$x^2 + 1$	(d)	$2x^{-2} + 5x^{-1} + 1$

Q8. *If* $x^3 + 6x^2 + 4x + k$ has a zero for $x = -2$, then value of k is $-$

(a)	-8	(b)	8
(c)	16	(d)	26

Q9. If the factorization of the cubic polynomial $(4x^3 - 12x^2 - x + 3)$ is $(2x - 1)(2x + 1)(x - 3)$, then the zeroes of the polynomial are $-$

(a)	$1, -1, 3$	(b)	$1, -1, -3$
(c)	$\frac{1}{2}, -\frac{1}{2}, 3$	(d)	$\frac{1}{2}, -\frac{1}{2}, -3$

Q10. $(x + 1)$is a factor of the polynomial

(a)	$x^3 + x^2 - x + 1$	(b)	$x^3 + x^2 + x + 1$
(c)	$x^4 + x^3 + x^2 + 1$	(d)	$x^4 + 3x^3 + 3x^2 + x + 1$

Q11. Co $-$ efficient of y^3 in the polynomial $(2y - 3)(1 + y + y^2 - y^3)$ is $-$

(a)	5	(b)	-2
(c)	-1	(d)	-3

Q12. The value of $p(x) = 4x^3 - 7x^2 - 15x + 3$ at $x = -1$ is

(a)	7	(b)	-7
(c)	17	(d)	-11

Q13. *The value of* $249^2 - 248^2$ *is* $-$

(a)	1	(b)	477
(c)	487	(d)	497

Q14. *If* $\frac{x}{y} + \frac{y}{x} = -1\ (x, y \neq 0)$, *then value of* $(x^3 - y^3)$ *is* $-$

(a)	1	(b)	-1
(c)	0	(d)	3

ASSERTION-REASON BASED QUESTIONS:

To answer the questions based on assertion-reason, consider the following options for each one of them:

(a) Both (A) and (R) are true and (R) is the correct explanation of (A).

(b) Both (A) and (R) are true but (R) is not the correct explanation of (A).

(c) (A) is true but (R) is false.

(d) (R) is true but (A) is false.

1. **Assertion (A):** As $\sqrt{3} = 1.732$, then $2 + \sqrt{3} = 3.732$, is an irrational number.
   Reason (R): The sum of a rational and an irrational number is an irrational number.

2. **Assertion (A):** Two irrational numbers between $\sqrt{5}$ *and* $\sqrt{7}$ *are* $\sqrt{6}$ *and* $\sqrt{6.5}$.
   Reason (R): There are finite numbers of irrational numbers between any two irrational numbers.

3. **Assertion (A):** $(2x + 1)(2x - 1)(x^2 + 3)$ is a cubic polynomial in x.
   Reason (R): A polynomial in one variable is called a cubic polynomial if its degree is 3.

4. **Assertion (A):** $(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yx + 2zx$ is true for all real values of x, y, z.
   Reason (R): $(x + y)^2 = x^2 + 2xy + y^2$, for all real values of x and y.
