EduSahara™ Worksheet

Name : Chapter Based Worksheet

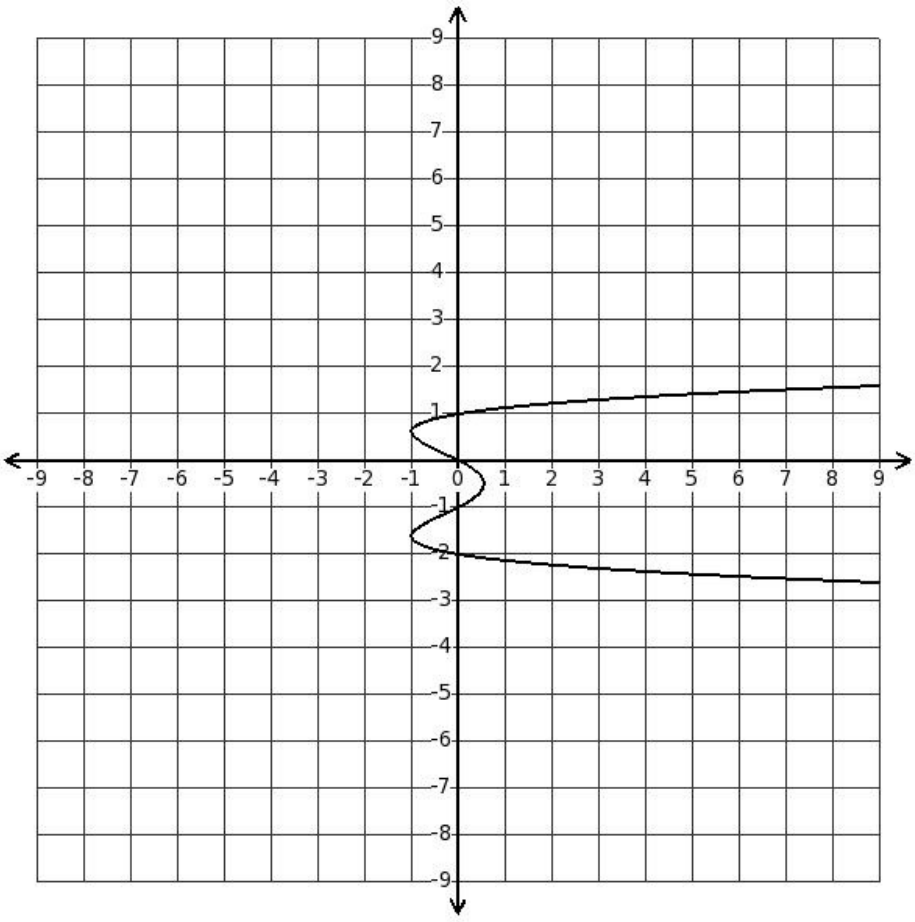
Chapter : Polynomials

Grade : CBSE Grade X

1. The degree of the polynomial $(-5g^2-3g-4)$ is

   (i) 2 (ii) (-1) (iii) 1 (iv) 3 (v) 5

2. From the following graph of $x = p(y)$, find the roots of $p(y)$



   (i) -2, 7, 0 and 1 (ii) -2, -1, -8 and 1 (iii) -2, -1, 0 and 1 (iv) 8, -1, 0 and 1 (v) -2, -1, 0 and 3

3. Which of the following are not polynomials?

   a) $49x^2$

   b) $\frac{(6x+3y)}{(3x-2y)}$

   c) $x+\frac{1}{x}$

   d) $(6x+3y)$

   e) $(18x^2-3xy-6y^2)$

   (i) {d,c} (ii) {d,c,b} (iii) {e,a,b} (iv) {a,b} (v) {b,c}

4. Which of the following is not a factor of $2xy^2z^4$?

   (i) $2x^2y^3z^4$ (ii) $2xyz^4$ (iii) $2xy^2z^3$ (iv) $2y^2z^2$ (v) $2y^2z^4$

5. Which of the following are true for the parabola $y=ax^2+bx+c$?

a) If the curve meets the X-axis at only one point , $b^2-4ac=0$

b) If the curve meets the X-axis at two places, there are two distinct non-real roots.

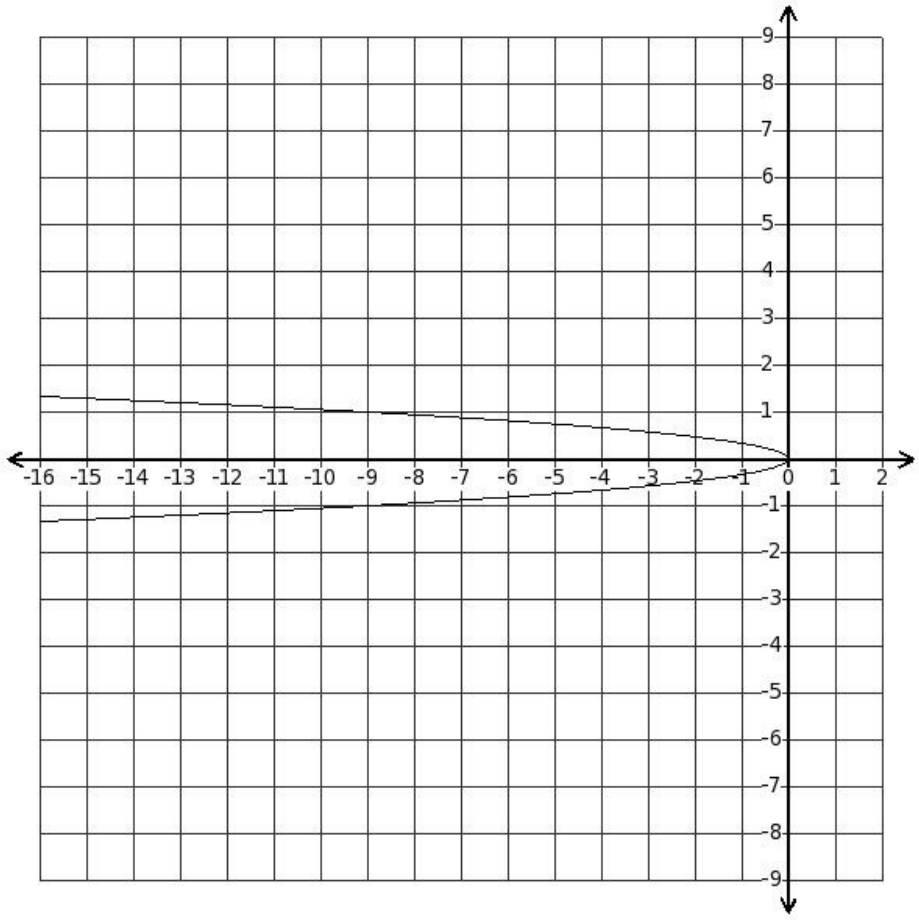
c) If the curve meets the X-axis at only one point , $b^2-4ac>0$

d) If the curve does not meet the X-axis,
there are no real roots for $y=ax^2+bx+c$

e) If the curve does not meet the X-axis , $b^2-4ac<0$

(i) {b,c,e} (ii) {b,a} (iii) {b,a,d} (iv) {a,d,e} (v) {c,d}

6. Which of the following equations represents the given graph ?



(i) $x=(-8y^2)$ (ii) $x=(-10y^2)$ (iii) $x=(-9y^2)$ (iv) $x=(-7y^2)$ (v) $x=(-12y^2)$

7. The quotient when $2h$ is divided by 5 is

(i) $\frac{2}{7}h$ (ii) 0 (iii) $\frac{4}{5}h$ (iv) $\frac{2}{5}h$ (v) $\frac{2}{3}h$

8. The quotient when $(-5p-9)$ is divided by $(p-4)$ is

(i) (-6) (ii) (-7) (iii) (-3) (iv) (-4) (v) (-5)

9. If (x^2-1) is a factor of $ax^4 + bx^3 + cx^2 + dx + e$, which of the following are true ?

a) b + d = 0
b) a + c + e = 0
c) a + b + c = 0
d) a + b + c = d + e
e) a + b + c + d + e = 0
f) d + e = 0

(i) {d,a,b} (ii) {f,c,e} (iii) {a,b,e} (iv) {c,a} (v) {d,b}

10. $(32x^3y^4+4x^2y^3) \div 2xy^2 =$

(i) $(16x^2y^2+2xy^2z)$ (ii) $(16x^2y^2+2y^2)$ (iii) $(16x^2y^2+2xy)$ (iv) $(16x^3y^3+2xy)$ (v) $(16x^3y^4+2xy)$

11. If $f(x)=(3x^3+2x^2-48x-32)$ and $g(x)=(3x^3+6x^2-57x-60)$ have a common factor, find the common factor

(i) $(3x+3)$ (ii) $(3x+2)$ (iii) $(x+4)$ (iv) $(x+5)$ (v) $(x-4)$

12. Factorize and divide $(10x^4+77x^3+5x^2-602x-120) \div (-x^2-10x-24)$

(i) $(-10x^2-27x-5)$ (ii) $(-10x^2+23x+5)$ (iii) $(-5x^2-31x-6)$ (iv) $(-10x^2-23x+5)$

(v) $(-10x^2+27x-5)$

13. The axis and origin of the parabola $y=2x^2$ are

(i) $x=0$,(0,0) (ii) $x=(-1)$,(1,0) (iii) $x=3$,(1,0) (iv) $x=1$,(-1,0)

14. The quotient when $(-2u^2)$ is divided by $(u+5)$ is

(i) $(-4u+10)$ (ii) $(-2u+10)$ (iii) $(-3u+10)$ (iv) $(-u+10)$ (v) $(u+10)$

15. $(10x^4-70x^3+80x^2+160x) \div (2x^2-16x+32)$

(i) $(5x^2+4x)$ (ii) $(5x^2+5x)$ (iii) $(5x^2+6x)$ (iv) $(-5x^2+5x)$ (v) $(5x^2-5x)$

16. Which of the following is an irreducible factor of $23x^5y^5z$?

(i) x^4y (ii) z (iii) xz^2 (iv) $x^4y^4z^2$ (v) y^4z

17. The product of the roots of the quadratic equation $(x^2-12x+36)=0$ is

(i) 39 (ii) 33 (iii) 35 (iv) 37 (v) 36

18. Find the roots of the quadratic equation $(10x^2+4x)=0$

(i) $(1,(\frac{-2}{5}))$ (ii) $(2,(\frac{-4}{5}))$ (iii) $(1,(\frac{-2}{3}))$ (iv) $(0,(\frac{-2}{5}))$ (v) $(2,(\frac{-2}{3}))$

19. Which of the following polynomials is not a multiple of $(x-2)$?

(i) $(2x^2-5x+3)$ (ii) $(3x^2-x-10)$ (iii) $(2x^2-7x+6)$ (iv) (x^2-4) (v) (x^2-3x+2)

20. The sum of the roots of the quadratic equation $16x^2 = 0$ is

(i) 1 (ii) -1 (iii) 0 (iv) 2 (v) -3

21. The remainder when $5g$ is divided by (-5) is

(i) 3 (ii) 1 (iii) (-1) (iv) (-2) (v) 0

22. $(4x^4y^3z^4 + 112x^3y^3z^4 + 16x^3y^2z^3) \div 2x^2yz^2 =$

(i) $(2x^3y^3z^2 + 56xy^2z^2 + 8xyz)$ (ii) $(2x^2y^2z^2 + 56xy^2z^2 + 8xyz)$ (iii) $(2x^2y^2z^2 + 8xyz + 56y^3z^2)$

(iv) $(2x^2y^2z^2 + 56xy^3z^3 + 8xyz)$ (v) $(2x^3y^4z^2 + 56xy^2z^2 + 8xyz)$

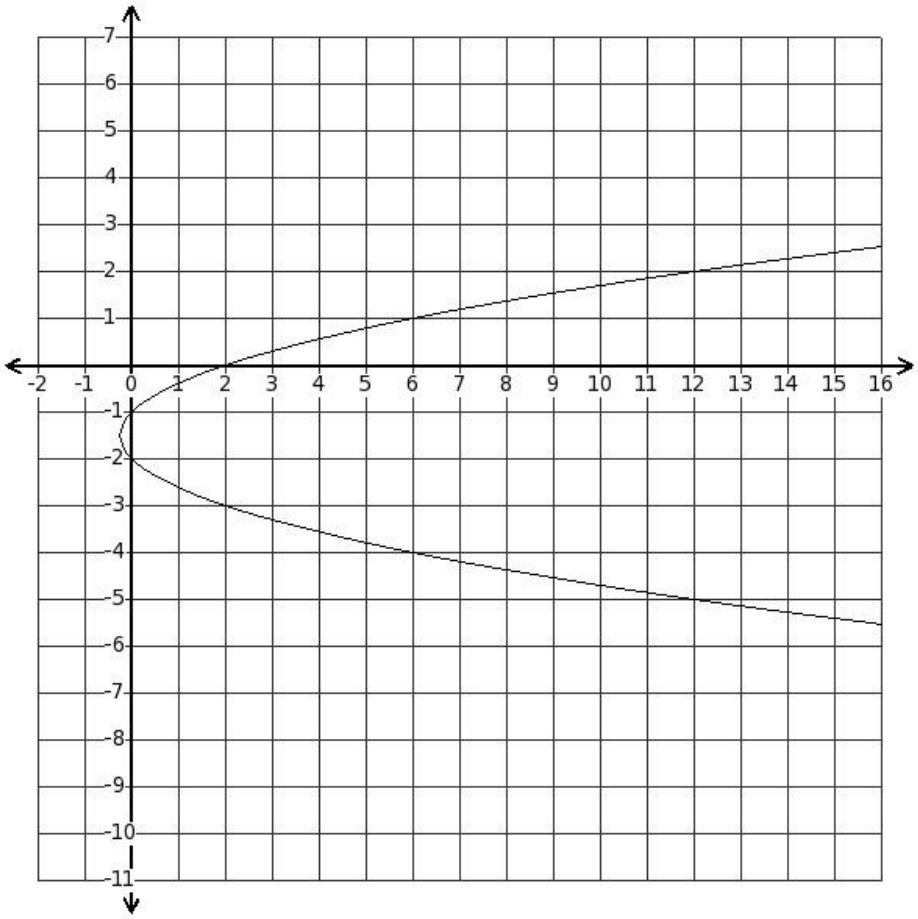
23. Which of the following algebraic expressions is a cubic polynomial?

(i) (-7) (ii) $(-5p^5 - p^4 - 6p^3 - 7p^2 + 8)$ (iii) $(-2p + 1)$ (iv) $(-2p^2 + 8p + 6)$ (v) $(2p^3 - p^2 - 8p + 7)$

24. Which of the following algebraic expressions is a quadratic polynomial?

(i) $(8u^5 - 5u^4 - u^2 - 3u - 9)$ (ii) $(6u - 8)$ (iii) (-4) (iv) $(7u^2 - 3u - 6)$ (v) $(2u^3 + 2u^2 - 6u + 6)$

25. Which of the following equations represents the given graph ?



(i) $x = (y^2 + 2)$ (ii) $x = (2y^2 + 3y + 2)$ (iii) $x = (y^2 + 3y + 2)$ (iv) $x = (3y + 2)$ (v) $x = (y^2 + 5y + 2)$

Assignment Key

1) (i)	2) (iii)	3) (v)	4) (i)	5) (iv)	6) (iii)
7) (iv)	8) (v)	9) (iii)	10) (iii)	11) (v)	12) (ii)
13) (i)	14) (ii)	15) (ii)	16) (ii)	17) (v)	18) (iv)
19) (i)	20) (iii)	21) (v)	22) (ii)	23) (v)	24) (iv)
25) (iii)					