EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Polynomials

Grade : SSC Grade X

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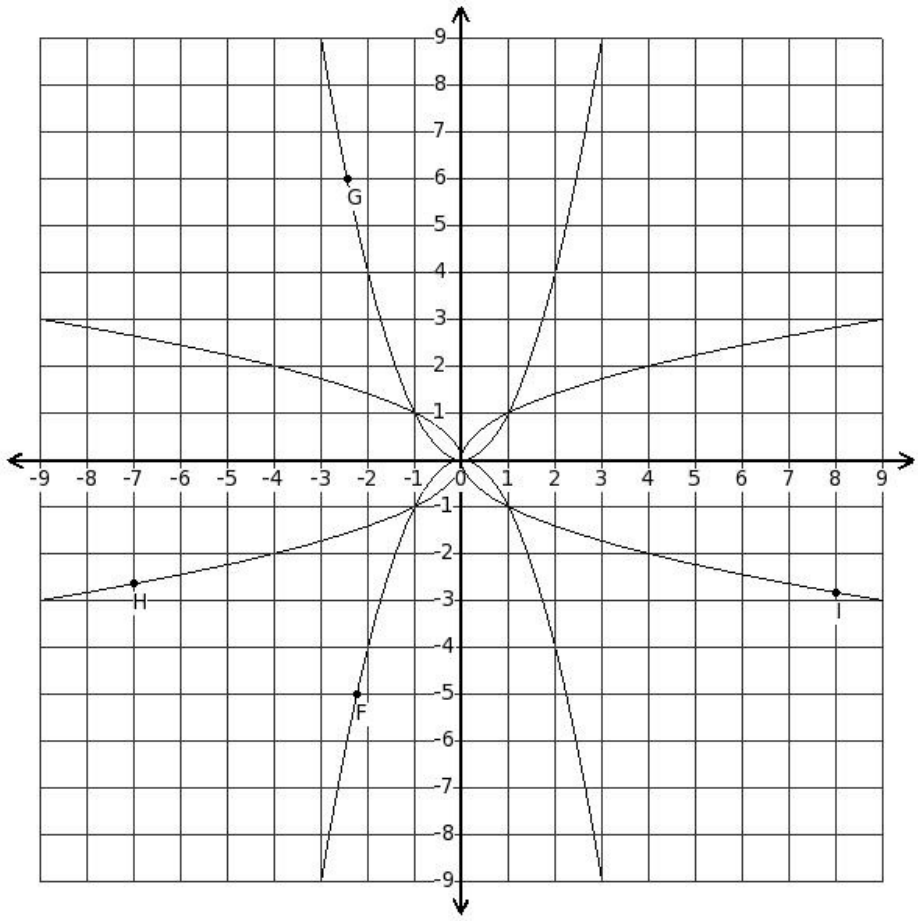
1. The value of the polynomial $(x+1)$ at $x=3$ is

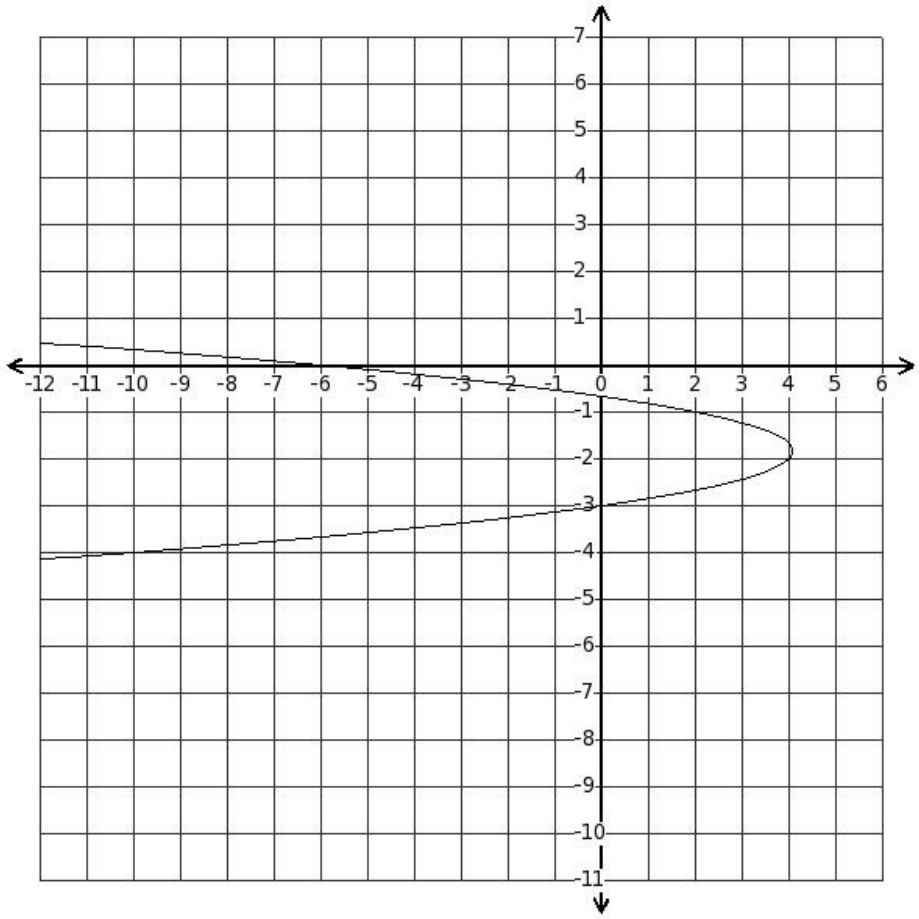
   (i) 4 (ii) 3 (iii) 6 (iv) 5 (v) 2

2. Which of the displayed parabolae represent the equation $x=(-y^2)$



(i) parabola with point H (ii) parabola with point F (iii) parabola with point I (iv) parabola with point G

3. Find the table of points that satisfy the parabola equation $x=(-3y^2-11y-6)$



(i)

x	4	2	-6	-20	-38
y	-2	-1	0	1	4

(ii)

x	4	2	-5	-20	-40
y	-2	-1	-1	1	2

(iii)

x	4	2	-6	-20	-40
y	-2	-1	0	1	2

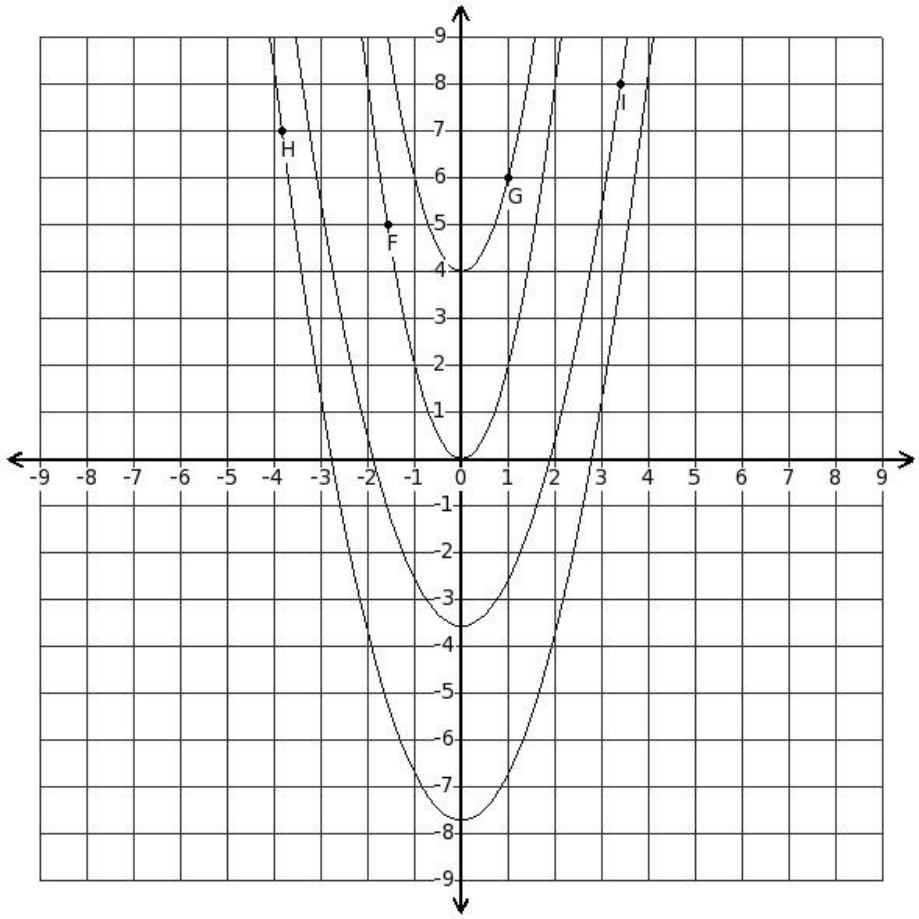
(iv)

x	4	2	-8	-20	-40
y	-2	-1	-2	1	2

(v)

x	4	2	-6	-21	-40
y	-2	-1	0	2	2

4. Which of the displayed parabolae represents the equation $y=(x^2-\frac{289}{81})$



(i) parabola with point I (ii) parabola with point F (iii) parabola with point H (iv) parabola with point G

5. Which of the following are true for m > 0 and a > 0?

a) The curve of a parabola $x=-my^2$ lies in the I & II quadrant

b) The curve of a parabola $x=-my^2$ lies in the II & III quadrant

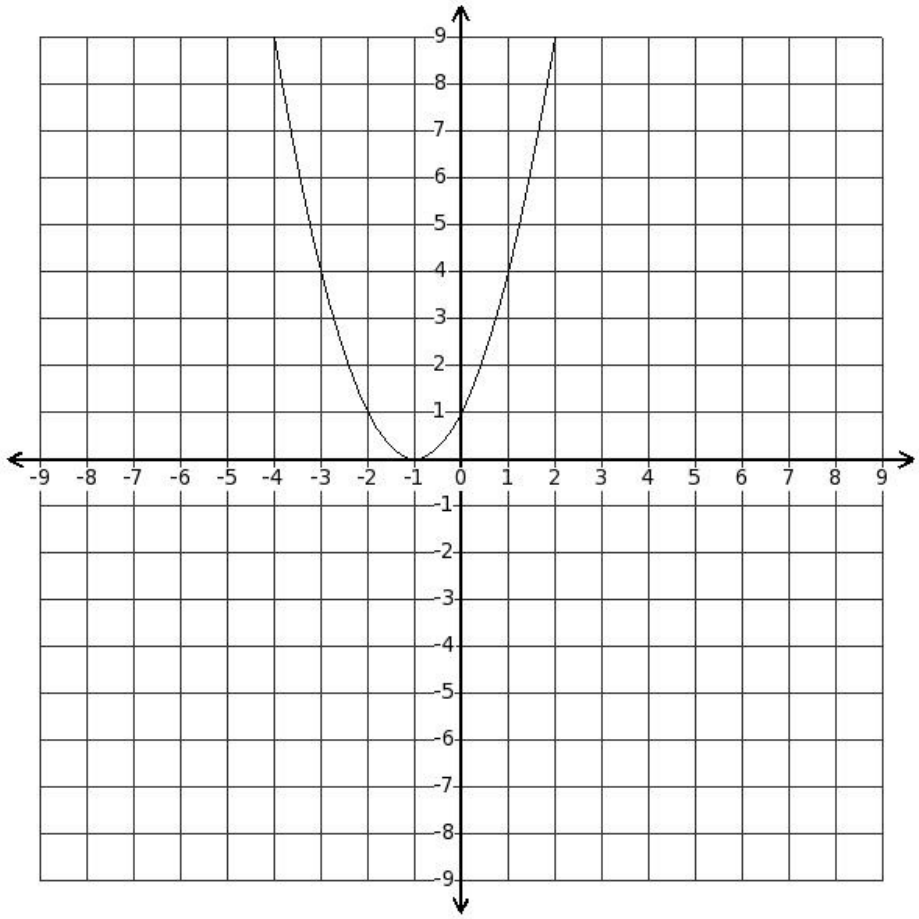
c) The curve of a parabola $y=mx^2$ lies in the I & II quadrant

d) The curve of a parabola $y=ax^2+bx+c$ lies in the I & II quadrant

e) The curve of a parabola $y=-mx^2$ lies in the I & II quadrant

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

6. Find the roots of the quadratic equation $(x^2+2x+1)=0$

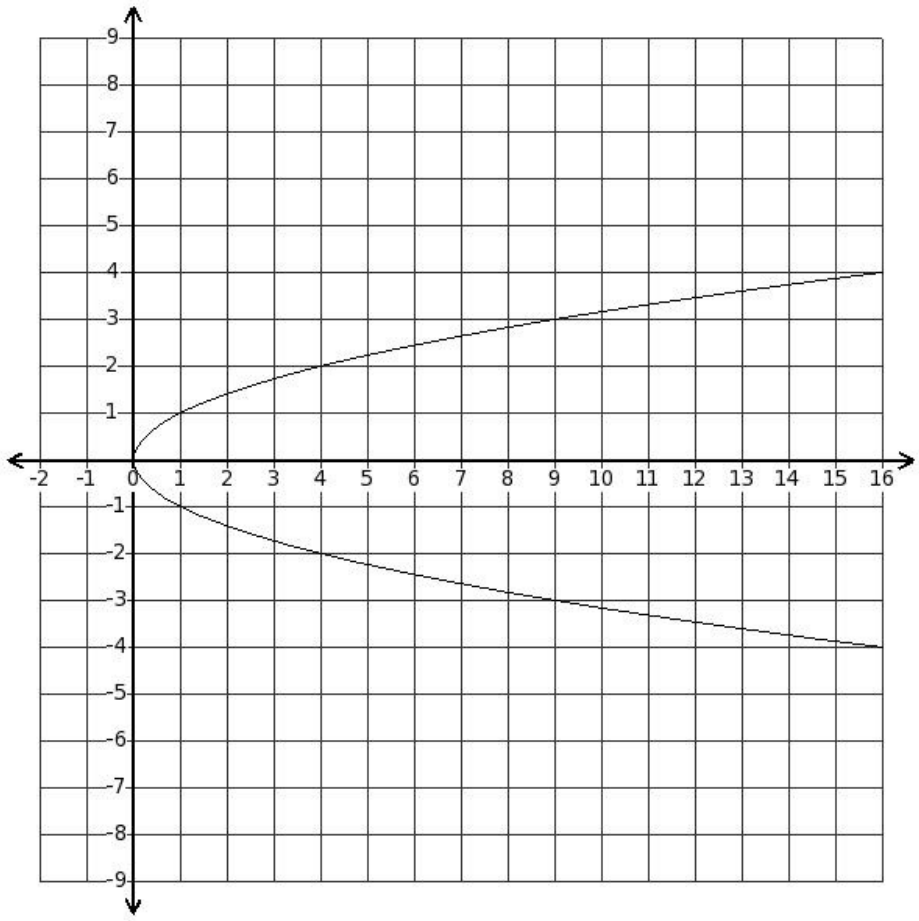


(i) (3,-1) (ii) (0,0) (iii) (-1,-1) (iv) (0,-1) (v) no real roots

7. The coefficient of term q^2s in polynomial $(3q^2s-4qr^2-4qrs^2-7qs-6r)$ is

(i) 4 (ii) 2 (iii) 1 (iv) 3 (v) 5

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



(i) $x=0$ (ii) $x=y^2$ (iii) $x=(-2y^2)$ (iv) $x=2y^2$ (v) $x=4y^2$

9. If α, β, γ are the roots of the cubic equation $(105x^3-317x^2+283x-63)=0$, find $\alpha + \beta + \gamma$

(i) $(-\frac{3}{5})$ (ii) $(-\frac{317}{105})$ (iii) $\frac{317}{105}$ (iv) $\frac{3}{5}$ (v) $\frac{283}{105}$

10. Which of the following algebraic expressions is a zero polynomial?

(i) $(2g^3h^3i^3-g^3h^3i^2-9g^3h^3+9g^2h)$ (ii) $(-9g^3h^3i)$ (iii) $(g^3h^2i^3-9gh^2i^3-7ghi^3)$

(iv) $(4g^2h^2i^3-4hi^2)$ (v) 0

11. Which of the following algebraic expressions is a linear polynomial?

(i) $(-5i^5+5i^3-5i^2-4i-1)$ (ii) (i^3+7i^2+5i+7) (iii) (-9) (iv) $(-7i^2-4i+8)$ (v) $(4i-9)$

12. Which of the following algebraic expressions is a monomial?

(i) $(3n^3-7no^3+9)$ (ii) $(-3n^2o^3p)$ (iii) $(9n^3o^3p^2-2n^3p^2-2n^2o^2+2p)$

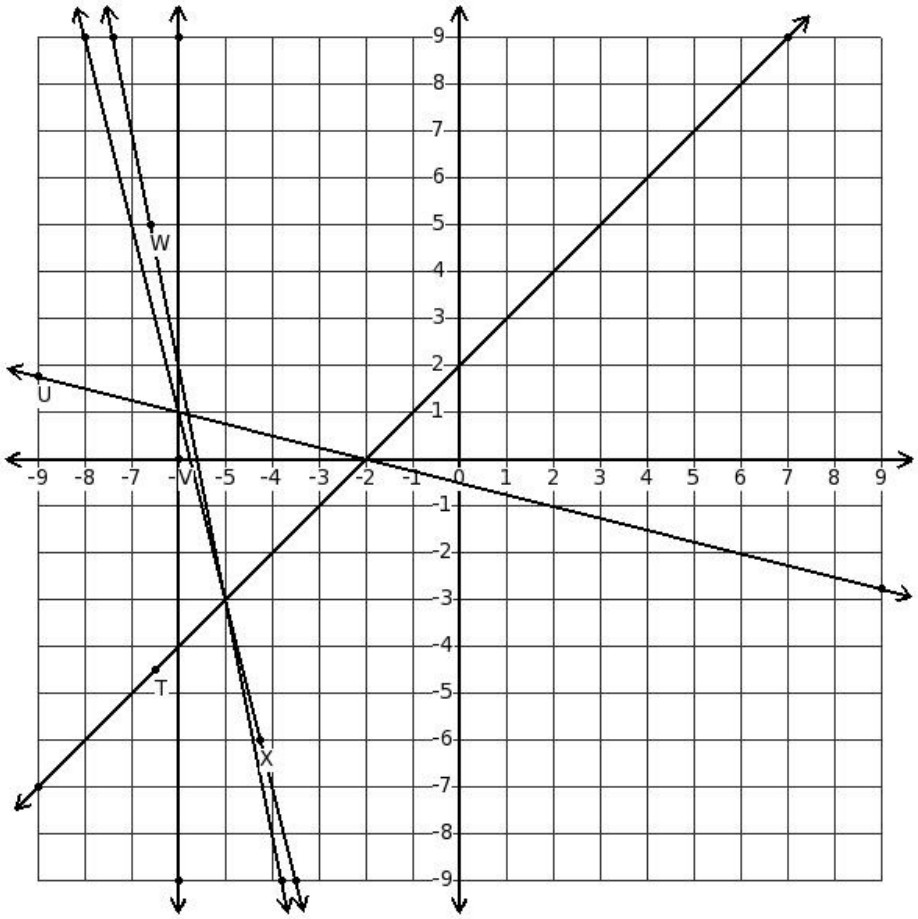
(iv) $(8n^3o^2p^2-7n^3op-3n^2o^2p^3+8nop)$ (v) $(7nop^2-2np^3)$

13. Find the quadratic equation, the sum of whose roots is -2 and product is 1

(i) $(24x^2+50x+25)=0$ (ii) $(26x^2+50x+25)=0$ (iii) $(25x^2+52x+25)=0$ (iv) $(25x^2+48x+25)=0$

(v) $(25x^2+50x+25)=0$

14. Which of the displayed lines represent the equation $y=(x+2)$



(i) line with point X (ii) line with point V (iii) line with point U (iv) line with point W (v) line with point T

15. The coefficient of term ij in polynomial $(i^2j^2+4ij-7j^2-9j)$ is

(i) 4 (ii) 7 (iii) 5 (iv) 2 (v) 3

16. The given table of points satisfy which parabola equation?

x	-3	-2	-1	0	1	2	3
y	-18	-8	-2	0	-2	-8	-18

(i) $y=0$ (ii) $y=(-3x^2)$ (iii) $y=(-5x^2)$ (iv) $y=(-x^2)$ (v) $y=(-2x^2)$

17. Which of the following are not polynomials?

a) $(11x-10y)$

b) $(4x+4y)$

c) $81x^2$

d) $81x^2+\frac{1}{81x^2}$

e) √x

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

18. Find the table of points that satisfy the parabola equation $y=(-6x^2-10x-4)$

(i)

x	-2	-1	0	0	2
y	-8	0	-4	-19	-48

(ii)

x	-2	-1	1	1	2
y	-8	0	-5	-20	-48

(iii)

x	-2	-1	0	1	2
y	-8	0	-4	-20	-48

(iv)

x	-2	-1	-2	1	2
y	-8	0	-6	-20	-48

(v)

x	-2	-1	0	1	4
y	-8	0	-4	-20	-46

19. Which of the following are true?

a) A binomial may have degree 3
b) Every polynomial is a binomial
c) Degree of zero polynomial is zero
d) A binomial has two and only two terms
e) πr^2 is a monomial

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

20. The value of the polynomial $(6u^2vw^2-4uv^2w-9v^2w)$ at $u=(-1), v=3, w=(-1)$ is

(i) 63 (ii) 62 (iii) 60 (iv) 64 (v) 65

21. The quotient when $(4k^2-3k+2)$ is divided by $(k-5)$ is

(i) $(2k+17)$ (ii) $(7k+17)$ (iii) $(5k+17)$ (iv) $(3k+17)$ (v) $(4k+17)$

22. Which of the following algebraic expressions is a monomial?

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

23. The value of the polynomial $(-6r^3-2r-7)$ at $r=(-5)$ is

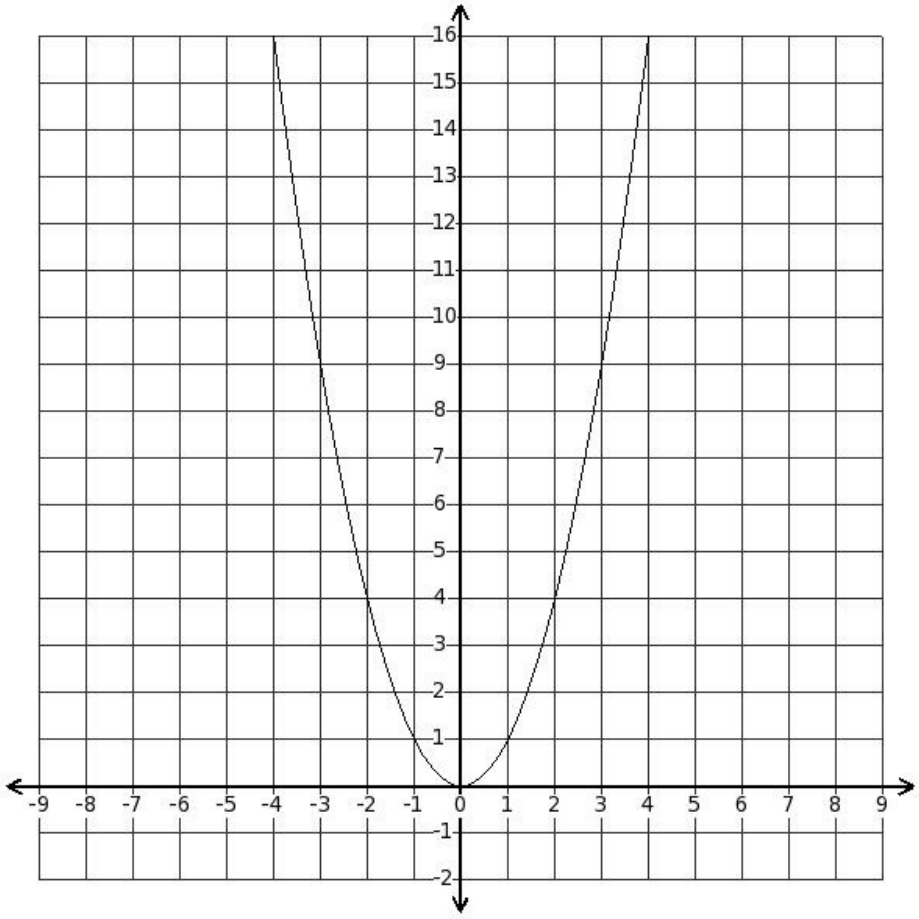
(i) 753 (ii) 754 (iii) 752 (iv) 756 (v) 751

24. Which of the following are true?

a) If (x - a) is a factor of f(x), then f(a) = 0
b) A linear polynomial in one variable has only one root
c) If (x + a) is a factor of f(x), then f(a) = 0
d) Zero of a polynomial and zero polynomial are synonymous
e) Zero of a polynomial is the value of the variable for which the polynomial value is zero
f) Zero of a polynomial and root of the polynomial are synonymous
g) A polynomial of degree n has atmost n zeros

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

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



(i) $y = x^2$ (ii) $y = 2x^2$ (iii) $y = (-2x^2)$ (iv) $y = 4x^2$ (v) $y = 0$

Assignment Key

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