# EduSahara™ Learning Center Assignment

**Grade : Class IX, SSC**
**Chapter : Polynomials and Factorisation**
**Name : Polynomial Division1**

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1. The quotient when $( -2e )$ is divided by $( -4 )$ is

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

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2. The quotient when $( -q^2 )$ is divided by $( q -3 )$ is

(i) $( 2q -3 )$ (ii) $( -2q -3 )$ (iii) $( -3 )$

(iv) $( -q -3 )$ (v) $( -3q -3 )$

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3. The quotient when $( 5d +2 )$ is divided by $( d +8 )$ is

(i) 2 (ii) 5 (iii) 8 (iv) 6 (v) 4

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4. The quotient when $( -2q^2 +4q -8 )$ is divided by $( q -2 )$ is

(i) $q$ (ii) $( -4q )$ (iii) $( -3q )$ (iv) $( -q )$ (v) $( -2q )$

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5. The quotient when $( -9k^2 +6k )$ is divided by $( k -2 )$ is

(i) $( -7k -12 )$ (ii) $( -12k -12 )$ (iii) $( -10k -12 )$

(iv) $( -8k -12 )$ (v) $( -9k -12 )$

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6. The quotient when $( -7v^2 -5v -4 )$ is divided by $( v +5 )$ is

(i) $( -5v +30 )$ (ii) $( -6v +30 )$ (iii) $( -8v +30 )$

(iv) $( -9v +30 )$ (v) $( -7v +30 )$

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7. The quotient when $( 4r^4 + r^3 - 4r^2 - r - 1 )$ is divided by $( r^2 + r - 6 )$ is

(i) $( 6r^2 - 3r + 23 )$ (ii) $( 5r^2 - 3r + 23 )$ (iii) $( 2r^2 - 3r + 23 )$

(iv) $( 4r^2 - 3r + 23 )$ (v) $( 3r^2 - 3r + 23 )$

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8. The quotient when $( 6r^5 - 2r^4 - 9r^3 - 7r^2 + 5r - 3 )$ is divided by $( r + 4 )$ is

(i) $( 4r^4 - 26r^3 + 95r^2 - 387r + 1553 )$

(ii) $( 9r^4 - 26r^3 + 95r^2 - 387r + 1553 )$

(iii) $( 6r^4 - 26r^3 + 95r^2 - 387r + 1553 )$

(iv) $( 5r^4 - 26r^3 + 95r^2 - 387r + 1553 )$

(v) $( 7r^4 - 26r^3 + 95r^2 - 387r + 1553 )$

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9. The remainder when $( -8h )$ is divided by $( -7 )$ is

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

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10. The remainder when $( 8x^4 + 5x^3 + 6x^2 + 5x )$ is divided by $( x^2 + x - 6 )$ is

(i) $( -72x + 342 )$ (ii) $( -67x + 342 )$ (iii) $( -70x + 342 )$

(iv) $( -71x + 342 )$ (v) $( -69x + 342 )$

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11. $( -12x^3 - 24x^2 - 3x + 9 ) \div ( 6x^2 + 3x - 3 ) =$

(i) $( -2x - 3 )$ (ii) $( -3x - 3 )$ (iii) $( 2x - 3 )$

(iv) $( -x - 3 )$ (v) $( -2x + 3 )$

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12. $( 18x^4 - 51x^3 - 21x^2 + 39x - 9 ) \div ( 18x^3 + 3x^2 - 12x + 3 ) =$

(i) $(x+3)$ (ii) $(-x-3)$ (iii) $(x-3)$

(iv) $(-3)$ (v) $(2x-3)$

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13. $(4x^5-12x^4-4x^3+28x^2-16)$ divided by $(2x^3-4x^2-2x+4) =$

(i) $(2x^2-2x+4)$ (ii) $(2x^2-2x-4)$ (iii) $(2x^2-3x-4)$

(iv) $(2x^2+2x-4)$ (v) $(2x^2-x-4)$

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14. $(32x^3y^3+4x^3y^2) \div 2x^2y =$

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

(iv) $(16xy^2+2y^2)$ (v) $(16xy^2+2xy)$

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15. $(1008x^2y^4z^3+16x^2y^4z^2+112x^2y^3z^2) \div 4xy^2z =$

(i) $(4xy^3z^2+252xy^2z^2+28xyz)$ (ii) $(252x^2y^3z^2+4xy^2z+28xyz)$

(iii) $(252xy^2z^2+4xy^2z+28xyz)$ (iv) $(252xy^2z^2+28xyz+4y^3z)$

(v) $(252x^2y^4z^2+4xy^2z+28xyz)$

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Factorize and divide

16. $(144x^4-580x^2+16) \div (12x^2+26x+4)$

(i) $(14x^2-26x+4)$ (ii) $(12x^2-26x+4)$

(iii) $(11x^2-26x+4)$ (iv) $(13x^2-26x+4)$

(v) $(9x^2-26x+4)$

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Factorize and divide

17. $(6x^4+20x^3-40x^2-80x+64) \div (-x^2-6x-8)$

(i) $(-6x^2+8x+8)$ (ii) $(-6x^2+16x-8)$

(iii) $( -6x^2 -16x -8 )$ (iv) $( -6x^2 -8x +8 )$

(v) $( 6x^2 +20x -16 )$

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18. Which of the following are true ?

a) If the degree of p(x) is less then the degree of d(x), we should not divide p(x) with d(x)

b) If p(x) is divided by (x - a), the remainder is p(a)

c) Division of a polynomial with another polynomial stops when the degree of the remainder equals the degree of the divisor

d) If p(a) = 0, then (x + a) perfectly divides p(x)

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

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19. $( 25x^4 +25x^3 ) \div 5x^2$

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

(iv) $( 4x^2 +5x )$ (v) $( 5x^2 +5x )$

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20. $( 4x^4 +19x^3 +12x^2 ) \div ( x^2 +4x )$

(i) $( 4x^2 -3x )$ (ii) $( 3x^2 +3x )$ (iii) $( -4x^2 +3x )$

(iv) $( 4x^2 +3x )$ (v) $( 4x^2 +4x )$

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21. $( 3x^4 +13x^3 +8x^2 -12x ) \div ( 3x^2 +4x -4 )$

(i) $( x^2 +2x )$ (ii) $( x^2 +4x )$ (iii) $( -x^2 +3x )$

(iv) $( x^2 +3x )$ (v) $( x^2 -3x )$

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# Assignment Key

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