

EduSahara™ Learning Center Assignment**Grade : Class X, SSC****Chapter : Polynomials****Name : Polynomial Division**

1. Which of the following are true?

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

2. Which of the following are true ?

- a) If $p(x)$ is divided by $(x - a)$, the remainder is $p(a)$
 - b) If the degree of $p(x)$ is less then the degree of $d(x)$, we should not divide $p(x)$ with $d(x)$
 - c) If $p(a) = 0$, then $(x + a)$ perfectly divides $p(x)$
 - d) Division of a polynomial with another polynomial stops when the degree of the remainder equals the degree of the divisor
- (i) $\{c,a\}$ (ii) $\{c,b,a\}$ (iii) $\{d,b\}$ (iv) $\{a,b\}$ (v) $\{c,d,a\}$

3. The quotient when $(-9w)$ is divided by (-7) is

- (i) $\frac{7}{5}w$ (ii) $\frac{11}{9}w$ (iii) $\frac{11}{7}w$ (iv) w (v) $\frac{9}{7}w$

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

- (i) $(-7x + 6)$ (ii) $(-9x + 6)$ (iii) $(-6x + 6)$
(iv) $(-4x + 6)$ (v) $(-5x + 6)$

5. The quotient when $(3g + 7)$ is divided by $(g - 3)$ is

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

6. The quotient when $(2x^2 + 5x - 3)$ is divided by $(x - 2)$ is

(i) 9 (ii) $(2x + 9)$ (iii) $(x + 9)$

(iv) $(4x + 9)$ (v) $(3x + 9)$

7. The quotient when $(8c^2 - 2c)$ is divided by $(c + 7)$ is

(i) $(5c - 58)$ (ii) $(8c - 58)$ (iii) $(10c - 58)$

(iv) $(9c - 58)$ (v) $(7c - 58)$

8. The quotient when $(3q^3 + 6q - 1)$ is divided by $(q - 4)$ is

(i) $(6q^2 + 12q + 54)$ (ii) $(12q + 54)$ (iii) $(3q^2 + 12q + 54)$

(iv) $(4q^2 + 12q + 54)$ (v) $(2q^2 + 12q + 54)$

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

(i) $(-6e^2 + 25e - 107)$ (ii) $(-4e^2 + 25e - 107)$ (iii) $(-5e^2 + 25e - 107)$

(iv) $(-8e^2 + 25e - 107)$ (v) $(-2e^2 + 25e - 107)$

10. The remainder when $(-7u^2)$ is divided by $(u + 7)$ is

(i) (-344) (ii) (-341) (iii) (-343) (iv) (-342) (v) (-346)

11. The remainder when $(5x - 3)$ is divided by $(x - 7)$ is

(i) 34 (ii) 33 (iii) 31 (iv) 30 (v) 32

12. The remainder when $(-8t^2 - 4t)$ is divided by $(t - 2)$ is

- (i) (-37) (ii) (-43) (iii) (-40) (iv) (-39) (v) (-41)
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13. The remainder when $(5c^2 + 6c - 1)$ is divided by $(c + 3)$ is
- (i) 27 (ii) 26 (iii) 23 (iv) 25 (v) 28
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14. The remainder when $(-4t^2 + 6t + 2)$ is divided by $(t - 6)$ is
- (i) (-108) (ii) (-107) (iii) (-103) (iv) (-106) (v) (-105)
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15. The remainder when $(5i^4 + 4i^3 - 6i^2 + 7i + 1)$ is divided by $(i^2 + 3i - 40)$ is
- (i) $(-1112i + 9081)$ (ii) $(-1116i + 9081)$ (iii) $(-1115i + 9081)$
- (iv) $(-1114i + 9081)$ (v) $(-1113i + 9081)$
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16. The remainder when $(-3i^4 - 8i^3 - i^2 + 9i)$ is divided by $(i^2 - 12i + 36)$ is
- (i) $(-3458i + 15156)$ (ii) $(-3460i + 15156)$ (iii) $(-3456i + 15156)$
- (iv) $(-3459i + 15156)$ (v) $(-3462i + 15156)$
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17. $(-12x^3 + 44x^2 - 51x + 18) \div (6x^2 - 13x + 6) =$
- (i) $(-3x + 3)$ (ii) $(-x + 3)$ (iii) $(-2x - 3)$
- (iv) $(-2x + 3)$ (v) $(2x + 3)$
-

18. $(-6x^4 - 19x^3 - 13x^2 + 4x + 4) \div (2x^3 + 5x^2 + x - 2) =$
- (i) $(3x - 2)$ (ii) $(-4x - 2)$ (iii) $(-2x - 2)$
- (iv) $(-3x + 2)$ (v) $(-3x - 2)$
-

19. $(16x^5 - 24x^4 - 60x^3 + 110x^2 - 6x - 36)$ divided by
- $(\quad)$ =

$$- 8x^3 + 32x^2 - 42x + 18$$

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

$$(iv) (-2x^2 - 4x - 2) \quad (v) (-2x^2 + 5x - 2)$$

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

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

$$(iv) (x^2 + 4x) \quad (v) (-x^2 + 3x)$$

$$21. (6x^4 + 21x^3 + 15x^2) \div (3x^2 + 3x)$$

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

$$(iv) (2x^2 - 5x) \quad (v) (2x^2 + 6x)$$

$$22. (8x^4 + 56x^3 + 50x^2 + 12x) \div (2x^2 + 13x + 6)$$

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

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

Assignment Key

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