

SA (1+2) Subject : Mathematics
Class – VIII
Assignment – 6

CHAPTER – 6 - HOME / TOPIC – ALGEBRAIC EXPRESSION

Choose the correct option (Question No. 1 – 5)

- Q.1 $(-11xy) \times (5x^2y)$ is
(a) $-55x^2y$ (b) $55x^2y$ (c) $-55x^3y^2$ (d) $-55x^2y^2$
- Q.2 The false statement is
(a) $-5(x^2 + 1) = -5x^2 - 5$ (b) $4(3x - 7) = 12x - 28$
(c) $x \times (-7) = x - 7$ (d) $xy(x^2y^2 - 3) = x^3y^3 - 3xy$
- Q.3 $(x + 4)(x - 5)$ is
(a) $x^2 + 9x - 20$ (b) $x^2 - 9x - 20$
(c) $x^2 + x - 20$ (d) $x^2 - x - 20$
- Q.4 Factors of $3y^2 + 3y - 36$ are
(a) $3(y - 4)(y - 3)$ (b) $3(y + 4)(y + 3)$
(c) $3(y + 4)(y - 3)$ (d) $3(y - 4)(y + 3)$
- Q.5 103×7 is equal to
(a) $100^2 - 3^2$ (b) $100 - 3$ (c) $100^2 + 3^2$ (d) $100 + 3$
- Q.6 Find the product
(i) $-\frac{5}{2}x^2y^2 \times -\frac{3}{4}x^3y \times -\frac{8}{7}xy^4$ (ii) $-8xy \times -11x^2y^2$
(iii) $-\frac{3}{2}p^2q^2 \times \frac{1}{3}p^3q^3$ (iv) $9m^2n^2 \times \frac{2}{3}mn \times -\frac{3}{4}m^3n^3$
(v) $(5a^2 - 9) \times -2a^2$ (vi) $(3x + 2y)(3x - 2y)$
(vii) $(5x^2y - 3y)(5y - 3x^2y)$ (viii) $(2x + 3)(3x - 2y + 4)$
- Q.7 Using identities, find the product.
(i) $(x + 5)(x + 3)$ (ii) $(2a + 4)(2a - 7)$
(iii) $(x + 2)(x + 2)$ (iv) $\left(\frac{2}{3}a + \frac{3}{4}b\right)^2$
(v) $(x^2 - xy)^2$ (vi) $(3m + 2n)(3m + 2n)$
(vii) $(5x + 2)(5x - 2)$ (viii) $(m^2 + n^2)(m^2 - n^2)$

Q.8 Using identities, Evaluate

- | | | |
|------------------------------------|---|-----------------|
| (i) $(99)^2$ | (ii) $(103)^2$ | (iii) $(9.2)^2$ |
| (iv) $34 \times 34 - 26 \times 26$ | (v) $7.87 \times 7.87 - 2.13 \times 2.13$ | |

Q.9 Find the value of x if

$$17x = 128^2 - 77^2$$

Q.10 Divide the following polynomials by Binomial

- | | |
|----------------------------------|--|
| (i) $2x^2 - x - 3$ by $x + 1$ | (ii) $11x^2 + 6x^3 + 11x + 12$ by $(2x + 3)$ |
| (iii) $2x^2 + 3x - 5$ by $x - 1$ | (iv) $3x^3 + 8x^2 + 8x + 5$ by $5 + 3x$ |

Q.11 (a) Divide $4a^3b^2 + 16a^2b + 8ab^2$ by $4ab$

(b) We know that dividend = divisor x quotient + remainder

Now, If dividend = Success, then

Success = Hardwork x _____ + Patience

(Fill in the blank)

Q.12 Factorise

- | | |
|-----------------------------------|------------------------------------|
| (i) $7a^2 + 14a$ | (ii) $ax^2y + bxy^2 + cxy^3$ |
| (iii) $10a^2 - 15b^2 + 20c^2$ | (iv) $4x(3x - y) + 7x(3x - y)$ |
| (v) $4a(7x - 9y) - 6a^2(7x - 9y)$ | (vi) $6a + 12b - 4(a + 2b)^2$ |
| (vii) $ax^2 + by^2 + bx^2 + ay^2$ | (viii) $15pq + 15 + 99 + 25p$ |
| (ix) $x^2 - x + y - xy$ | (x) $x^3 - 6y^3 + 3xy^2 - 2x^{2y}$ |

Q.13 Factorise using identities.

- | | |
|--------------------------------|------------------------|
| (i) $49x^2 - 36y^2$ | (ii) $9x^2y^2 - 16z^2$ |
| (iii) $(l + m)^2 - (l - m)^2$ | (iv) $63a^2 - 112b^2$ |
| (v) $3x^3y - 243xy^3$ | (vi) $m^4 - 256$ |
| (vii) $x^4 - (x - z)^4$ | (viii) $x^2 + 8x + 16$ |
| (ix) $4y^2 - 12y + 9$ | (x) $4x^2 - 8x + 4$ |
| (xi) $9x^2y^2 - 30xyz + 25z^2$ | (xii) $q^2 - 10q + 21$ |

Q.14 Factorise

- | | |
|-----------------------|-----------------------|
| (i) $x^2 + 2x - 48$ | (ii) $y^2 - 4y - 21$ |
| (iii) $3m^2 + 9m + 6$ | (iv) $2n^2 - 7n + 6$ |
| (v) $m^2 + 14m + 24$ | (vi) $4x^2 - 6x - 28$ |