

Name : _____

Algebraic Identity

ES2

Expand each expression using algebraic identity.

1) $(a - b^2 + 2c)^2$

2) $(5m^3 + n + 2)^2$

3) $(w - 9x - y)^2$

5) $(r + 2st - 5)^2$

7) $\left(k^2 + \frac{3}{k} + 7\right)^2$

9) $(-q^2 - r^2 + s^2)^2$

10) $\left(-\frac{1}{c} + d + 3\right)^2$

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Algebraic Identity

Expand each expression using algebraic identity.

1) $(a - b^2 + 2c)^2$

$$b^4 - 2ab^2 - 4b^2c + a^2 + 4c^2 + 4ac$$

2) $(5m^3 + n + 2)^2$

$$25m^6 + 10m^3n + 20m^3 + n^2 + 4n + 4$$

3) $(w - 9x - y)^2$

$$w^2 + 81x^2 + y^2 - 18$$

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$$16v^2 + \frac{1}{v^4} - \frac{8}{v}$$

5) $(r + 2st - 5)^2$

$$4s^2t^2 + 4rst + r^2 - 2$$

$$24pq + 4qr + 12pr$$

7) $\left(k^2 + \frac{3}{k} + 7\right)^2$

$$k^4 + 14k^2 + 6k + \frac{9}{k^2}$$

$$h^2 + h^2 - 16h + 64$$

9) $(-q^2 - r^2 + s^2)^2$

$$q^4 + r^4 + s^4 + 2q^2r^2 - 2r^2s^2 - 2q^2s^2$$

10) $\left(-\frac{1}{c} + d + 3\right)^2$

$$d^2 + 6d - \frac{2d}{c} + \frac{1}{c^2} - \frac{6}{c} + 9$$