

Name : _____

Algebraic Identities

MS1

Expand each expression using algebraic identities.

1) $\left(\frac{1}{x} + x^2\right)^2$

2) $(4.2p - 5q)^2$

3) $\left(1 - \frac{y}{z}\right)^2$

4) $(-3n)^2$

5) $(1.4 - 0.9k)^2$

7) $(6g^4 + h^2)^2$

9) $\left(\frac{2}{u} - \frac{v}{3}\right)^2$

10) $(8 + 3.1s)^2$

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Algebraic Identities

Expand each expression using algebraic identities.

1) $\left(\frac{1}{x} + x^2\right)^2$

$x^4 + 2x + \frac{1}{x^2}$

2) $(4.2p - 5q)^2$

$17.64p^2 - 42pq + 25q^2$

3) $\left(1 - \frac{y}{z}\right)^2$

$\frac{y^2}{z^2} - \frac{2y}{z} + 1$

5) $(1.4 - 0.9k)^2$

$0.81k^2 - 2.52k + 1.96$

7) $(6g^4 + h^2)^2$

$36g^8 + 12g^4h^2 + h^4$

9) $\left(\frac{2}{u} - \frac{v}{3}\right)^2$

$\frac{v^2}{9} - \frac{4v}{3u} + \frac{4}{u^2}$

10) $(8 + 3.1s)^2$

$9.61s^2 + 49.6s + 64$

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