

Name : _____

Expand: Algebraic Identities

Sheet 2

Expand each expression using algebraic identities.

1) $(uv + 8)(u^2v^2 - 8uv + 64)$

2) $(3p + 2)(9p^2 - 6p + 4)$

3) $(a + b)(a^2 - ab + b^2) + \frac{15c}{d} + \frac{9c^2}{d^2}$

5) $\left(2 - \frac{1}{t^3}\right)(4 + 7xy^2 + 49)$

7) $(pq + r)(p^2 + 9mn + n^2)$

9) $(6g - 5h)(36g^2 + 30gh + 25h^2)$

10) $\left(w + \frac{4}{w}\right)\left(w^2 - 4 + \frac{16}{w^2}\right)$

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Expand: Algebraic Identities

Expand each expression using algebraic identities.

1) $(uv + 8)(u^2v^2 - 8uv + 64)$

$u^3v^3 + 512$

2) $(3p + 2)(9p^2 - 6p + 4)$

$27p^3 + 8$

3) $(a + b)(a^2 -$

$a^3 + b^3$

$+ \frac{15c}{d} + \frac{9c^2}{d^2}$

5) $(2 - \frac{1}{t^3})(4 +$

$-\frac{1}{t^9} + 8$

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7) $(pq + r)(p^2c$

$p^3q^3 + r^3$

$m^2 + 9mn + n^2$

9) $(6g - 5h)(36g^2 + 30gh + 25h^2)$

$216g^3 - 125h^3$

10) $(w + \frac{4}{w})(w^2 - 4 + \frac{16}{w^2})$

$w^3 + \frac{64}{w^3}$