

Name : _____

Factors: Algebraic Identities

ES3

Factorize each expression using algebraic identities.

1) $t^2 - 8t + 15$

2) $q^2 + \frac{2q}{p} + \frac{1}{p^2}$

3) $49 - \frac{1}{v^2}$

5) $m^2 - 2mn + n^2$

7) $g^2 - 9$

9) $\frac{1}{z^2} + \frac{8}{z} + 12$

10) $x^2 + 6x - 27$

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Factors: Algebraic Identities

Factorize each expression using algebraic identities.

1) $t^2 - 8t + 15$

$(t - 3)(t - 5)$

2) $q^2 + \frac{2q}{p} + \frac{1}{p^2}$

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

3) $49 - \frac{1}{v^2}$

$\left(7 + \frac{1}{v}\right)\left(7 - \frac{1}{v}\right)$

5) $m^2 - 2mn + n^2$

$(m - n)^2$

7) $g^2 - 9$

$(g + 3)(g - 3)$

9) $\frac{1}{z^2} + \frac{8}{z} + 12$

$\left(\frac{1}{z} + 2\right)\left(\frac{1}{z} + 6\right)$

10) $x^2 + 6x - 27$

$(x - 3)(x + 9)$

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