

Name : _____

Factors: Algebraic Identities

MS2

Factorize each expression using algebraic identities.

1) $4p^2 + 28pq + 49q^2$

2) $a^2b^2 - 2abcd + c^2d^2$

3) $\frac{6}{t^2} - \frac{24u}{t} + 24u^2$

5) $75xy^2 + 30xy$

7) $v^2w^2 + 4v + \frac{4}{v}$

9) $r^2 - 16rst + 64s^2t^2$

10) $mn^2 + 26mn + 169m$

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Name : _____

Answer key

MS2

Factors: Algebraic Identities

Factorize each expression using algebraic identities.

1) $4p^2 + 28pq + 49q^2$

$(2p + 7q)^2$

2) $a^2b^2 - 2abcd + c^2d^2$

$(ab - cd)^2$

3) $\frac{6}{t^2} - \frac{24u}{t} + 24u^2$

$6\left(\frac{1}{t} - 2u\right)^2$

5) $75xy^2 + 30xyz + 4z^3$

$3x(5y + z)^2$

7) $v^2w^2 + 4vw + 4$

$\left(vw + \frac{2}{w}\right)^2$

9) $r^2 - 16rst + 64s^2t^2$

$(r - 8st)^2$

10) $mn^2 + 26mn + 169m$

$m(n + 13)^2$

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