

Name : _____

Factors: Algebraic Identity

ES2

Factorize each expression using algebraic identity.

1) $a^2b^2 - 2abc + c^2 + 14ab - 14c + 49$

2) $g^2 + h^2 + 2gh - 8h - 8g + 16$

3) $r^2 - 6r + \frac{p^2}{q^2} + \frac{2pr}{q}$

$18d + 18c + 81$

5) $m^2 + n^2 - 2mn + 1$

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$0z + 10y + 25$

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

$2s + 12r + 36$

9) $y^2 + x^2 + z^2 - 2xy - 2xz + 2yz$

10) $t^2 + 2t + \frac{1}{u^2} + \frac{2t}{u} + \frac{2}{u} + 1$

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Factors: Algebraic Identity

Factorize each expression using algebraic identity.

1) $a^2b^2 - 2abc + c^2 + 14ab - 14c + 49$

$(ab - c + 7)^2$

2) $g^2 + h^2 + 2gh - 8h - 8g + 16$

$(g + h - 4)^2$

3) $r^2 - 6r + \frac{p^2}{q^2} + \frac{2pr}{q}$

$\left(r + \frac{p}{q} - 3\right)^2$

18d + 18c + 81

5) $m^2 + n^2 - 2mn + 6m - 12n + 8$

$(-m + n + 8)^2$

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10z + 10y + 25

7) $v^2 + w^2 + u^2 + 2vw - 2vu + 2uw$

$(v + w - u)^2$

2s + 12r + 36

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9) $y^2 + x^2 + z^2 - 2xy - 2xz + 2yz$

$(y - x + z)^2$

10) $t^2 + 2t + \frac{1}{u^2} + \frac{2t}{u} + \frac{2}{u} + 1$

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