

Name : _____

Factors: Algebraic Identity

ES1

Factorize each expression using algebraic identity.

1) $s^2 + 8s + 15$

2) $m^2n^2 + 3mn - 10$

3) $\frac{1}{p^2} - \frac{5}{p} + 6$

4) $v^2 - 6v + 5$

5) $x^2 - 7x - 8$

6) $p^2q^2 + 10pq + 21$

7) $n^2 + n - 42$

8) $u^2 + uw + uv + vw$

9) $y^2 - 3yz + 2z^2$

10) $\frac{1}{a^2} - \frac{3}{a} - 18$

Name : _____

Answer key

ES1

Factors: Algebraic Identity

Factorize each expression using algebraic identity.

1) $s^2 + 8s + 15$

$(s + 3)(s + 5)$

2) $m^2n^2 + 3mn - 10$

$(mn + 5)(mn - 2)$

3) $\frac{1}{p^2} - \frac{5}{p} + 6$

$\left(\frac{1}{p} - 3\right)\left(\frac{1}{p} - 2\right)$

4) $v^2 - 6v + 5$

$(v - 5)(v - 1)$

5) $x^2 - 7x - 8$

$(x - 8)(x + 1)$

6) $p^2q^2 + 10pq + 21$

$(pq + 7)(pq + 3)$

7) $n^2 + n - 42$

$(n + 7)(n - 6)$

8) $u^2 + uw + uv + vw$

$(u + v)(u + w)$

9) $y^2 - 3yz + 2z^2$

$(y - z)(y - 2z)$

10) $\frac{1}{a^2} - \frac{3}{a} - 18$

$\left(\frac{1}{a} - 6\right)\left(\frac{1}{a} + 3\right)$