

Name : \_\_\_\_\_

## Algebraic Identities

ES3

Expand each expression using algebraic identities.

1)  $(d^2 - 6)^2$

2)  $(4 + 7x)^2$

3)  $(u^3 + v^3)^2$

5)  $\left(a + \frac{3}{a}\right)^2$

7)  $(4 - y)^2$

9)  $(2q + 5r)^2$

10)  $(7m - 3n)^2$

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## Answer key

ES3

### Algebraic Identities

Expand each expression using algebraic identities.

1)  $(d^2 - 6)^2$

$d^4 - 12d^2 + 36$

2)  $(4 + 7x)^2$

$49x^2 + 56x + 16$

3)  $(u^3 + v^3)^2$

$u^6 + 2u^3v^3 + v^6$

5)  $\left(a + \frac{3}{a}\right)^2$

$a^2 + \frac{9}{a^2} + 6$

7)  $(4 - y)^2$

$y^2 - 8y + 16$

9)  $(2q + 5r)^2$

$4q^2 + 20qr + 25r^2$

10)  $(7m - 3n)^2$

$49m^2 - 42mn + 9n^2$

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