

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

## Expand: Algebraic Identities

ES3

Expand each expression using algebraic identities.

1)  $\left(r - \frac{7}{s}\right)^2$

2)  $(g - h - 5)^2$

3)  $(3 - 4k)(3 + 4k)$

5)  $(c^4 + d^2)(c^4 - d^2)$

7)  $(z^3 - 4)^2$

9)  $(8 - s)(8 + s)$

10)  $\left(-x + \frac{6}{x} - y\right)^2$

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**Expand: Algebraic Identities**

Expand each expression using algebraic identities.

1)  $\left(r - \frac{7}{s}\right)^2$

$$r^2 + \frac{49}{s^2} - \frac{14r}{s}$$

2)  $(g - h - 5)^2$

$$g^2 + h^2 - 2gh - 10g + 10h + 25$$

3)  $(3 - 4k)(3 + 4k)$

$$-8k^2 - 6k + 9$$

5)  $(c^4 + d^2)(c^4 - d^2)$

$$c^8 - d^4$$

7)  $(z^3 - 4)^2$

$$z^6 - 8z^3 + 16$$

9)  $(8 - s)(8 + s)$

$$-s^2 + 64$$

10)  $\left(-x + \frac{6}{x} - y\right)^2$

$$x^2 + y^2 + 2xy + \frac{36}{x^2} - \frac{12y}{x} - 12$$

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