

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

## Expand: Algebraic Identities

Sheet 2

Expand each expression using algebraic identities.

1)  $(5 - uv)^3$

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

3)  $(x + yz)^3$

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

7)  $(r^2 - 7s)^3$

9)  $(6t + 1)^3$

10)  $(4 - g^3)^3$

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**Expand: Algebraic Identities**

Expand each expression using algebraic identities.

1)  $(5 - uv)^3$

$$-u^3v^3 + 15u^2v^2 - 75uv + 125$$

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

$$-\frac{1}{h^3} + \frac{9}{h^2} - \frac{27}{h} + 27$$

3)  $(x + yz)^3$

$$y^3z^3 + 3x^2yz$$

$$2a^2b + 24ab^2$$

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

$$\frac{27}{c^3} + \frac{54}{c^2} + 36 + 8$$

$$+ 189q + 27$$

7)  $(r^2 - 7s)^3$

$$r^6 - 21r^4s + 147r^2s^2 - 343s^3$$

$$+ 3mn$$

9)  $(6t + 1)^3$

$$216t^3 + 108t^2 + 18t + 1$$

10)  $(4 - g^3)^3$

$$-g^9 + 12g^6 - 48g^3 + 64$$

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