

Name : _____

Algebraic Identity

MS3

Expand each expression using algebraic identity.

1) $\left(u + \frac{5}{2u}\right)\left(u - \frac{5}{2u}\right)$

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

3) $(8b + 9c)(8b - 9c)$ 2.9h

5) $\left(\frac{1}{k^2} + 3\right)\left(\frac{1}{k^2} - 3\right)$ 0.7u

7) $\left(xy + \frac{1}{2}\right)\left(xy - \frac{1}{2}\right)$

9) $\left(1.2s + \frac{t}{s}\right)\left(1.2s - \frac{t}{s}\right)$

10) $(3.1 + 0.3n)(3.1 - 0.3n)$

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Algebraic Identity

Expand each expression using algebraic identity.

1) $\left(u + \frac{5}{2u}\right)\left(u - \frac{5}{2u}\right)$

$$u^2 - \frac{25}{4u^2}$$

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

$$\frac{s^2}{9} - r^6$$

3) $(8b + 9c)(8b - 9c)$

$$64b^2 - 81c^2$$

5) $\left(\frac{1}{k^2} + 3\right)\left(\frac{1}{k^2} - 3\right)$

$$\frac{1}{k^4} - 9$$

7) $\left(xy + \frac{1}{2}\right)\left(xy - \frac{1}{2}\right)$

$$x^2y^2 - \frac{1}{4}$$

9) $\left(1.2s + \frac{t}{s}\right)\left(1.2s - \frac{t}{s}\right)$

$$1.44s^2 - \frac{t^2}{s^2}$$

10) $(3.1 + 0.3n)(3.1 - 0.3n)$

$$-0.09n^2 + 9.61$$

2.9h)

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0.7u)

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