

Name : _____

Expand: Algebraic Identities

MS3

Expand each expression using algebraic identities.

1) $\left(\frac{m}{8} + 3n\right)\left(\frac{m}{8} + 5n\right)$

2) $\left(d + \frac{6}{5}\right)\left(d - \frac{6}{5}\right)$

3) $(3.7r - 2)^2$

5) $(c - 1)(c + 1)$

7) $(6g - 1.7h)^2$

9) $\left(x - y + \frac{z}{2}\right)^2$

10) $\left(\frac{a}{6} + b\right)^2$

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Expand: Algebraic Identities

Expand each expression using algebraic identities.

1) $\left(\frac{m}{8} + 3n\right)\left(\frac{m}{8} + 5n\right)$

$$\frac{m^2}{64} + 15n^2 + mn$$

2) $\left(d + \frac{6}{5}\right)\left(d - \frac{6}{5}\right)$

$$d^2 - \frac{36}{25}$$

3) $(3.7r - 2)^2$

$$13.69r^2 - 14.8r + 4$$

5) $(c - 1)(c + 1)$

$$c^2 - 1$$

7) $(6g - 1.7h)^2$

$$36g^2 + 2.82h^2 - 20.4gh$$

9) $\left(x - y + \frac{z}{2}\right)^2$

$$x^2 + y^2 + \frac{z^2}{4} - 2xy - yz + xz$$

10) $\left(\frac{a}{6} + b\right)^2$

$$\frac{a^2}{36} + b^2 + \frac{ab}{3}$$

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$$\frac{2pq}{3} + p + \frac{q}{3} + 0.25$$

$$\frac{.8t}{9} + \frac{1}{81}$$

$$u - 2.3v$$