

Name : _____

Algebraic Identity

ES3

Expand each expression using algebraic identity.

1) $(8v + 2w - 5x)^2$

2) $\left(\frac{1}{3p} - q^2 - r^3\right)^2$

3) $(-m^2 - 2mn + 4)^2$

5) $(x + 4y + 7z)^2$

7) $(rs - 9t - 1)^2$

9) $\left(-g^4 - \frac{1}{g} - h\right)^2$

10) $(4u - 3v - 7)^2$

PREVIEW

Gain complete access to the largest
collection of worksheets in all subjects!

Members, please
log in to
download this
worksheet.

Not a member?
Please sign up to
gain complete
access.

www.mathworksheets4kids.com

Algebraic Identity

Expand each expression using algebraic identity.

1) $(8v + 2w - 5x)^2$

$$64v^2 + 4w^2 + 25x^2 + 32vw - 20wx - 80vx$$

2) $\left(\frac{1}{3p} - q^2 - r^3\right)^2$

$$r^6 + 2q^2r^3 + q^4 - \frac{2r^3}{3p} - \frac{2q^2}{3p} + \frac{1}{9p^2}$$

3) $(-m^2 - 2mn + 4)^2$

$$m^4 + 4m^3n + 4m^2n^2 + 16m^2 + 16mn + 16$$

5) $(x + 4y + 7z)^2$

$$x^2 + 16y^2 + 49z^2 + 8xy + 14xz + 28yz$$

7) $(rs - 9t - 1)^2$

$$r^2s^2 - 18rst + 81t^2 + 2rs - 18t - 1$$

9) $\left(-g^4 - \frac{1}{g} - h\right)^2$

$$g^8 + 2g^4h + 2g^3 + h^2 + \frac{1}{g^2} + \frac{2h}{g}$$

10) $(4u - 3v - 7)^2$

$$16u^2 + 9v^2 - 24uv - 56u + 42v + 49$$

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com