Expanding Single Brackets

ANSWERS

1

Expand.

$-4p(3-2p)$

$-4p \times -2p = +8p^2$

Answer $8p^2 - 12p$

2

Expand.

$\frac{2}{3}(9x - 6y + 12)$

$\frac{1}{3}$ of $9x$ is $3x$, so $\frac{2}{3}$ of $9x$ is $6x$

Answer $6x - 4y + 8$

3

Expand.

$5x^2(x^3 - 4x)$

$x^2 \times x^3 = x^5$

Answer $5x^5 - 20x^3$

4

Expand.

$3y^4(y^{-2} + 2y^{-1})$

$4 + (-2) = 2$ and $4 + (-1) = 3$

Answer $3y^2 + 6y^3$

5

Expand and simplify.

$x^2(x+5) - x(x^2 - 3x)$

$x^3 + 5x^2 - x^3 + 3x^2$

the x^3 terms cancel

Answer $8x^2$

6

Fill in the bracket.

$2x^3(\quad) = 8x^5 - 6x^2$

$3 + (-1) = 2$, so $2x^3 \times -3x^{-1} = -6x^2$

Answer $2x^3(4x^2 - 3x^{-1})$

7

Show that $3n(n+4) - n(3n-2)$ is a multiple of 14 for any whole number n.

$3n^2 + 12n - 3n^2 + 2n$

$= 14n$, which is $14 \times n$

Shown $14n$

8

Expand and simplify.

$4x^3(x^{-1} - 2x^{-2}) - x(3x - 5)$

$4x^2 - 8x - 3x^2 + 5x$

$= x^2 - 3x$

Answer $x^2 - 3x$