

Name : _____

Simplify: Multi-variable Expressions

MS5

Simplify each expression.

1) $\frac{1}{3}(9b^3c^5 + 15b^2c^5) + (9b^2c^5 - 15b^3c^5)$ 2) $5u^2v^2 - 8uv + 4u^2v^2 - (2uv)^2 - 2uv$

3) $(s^3 - 4tu^2) - (s^3 - 2tu^2 + 4t^2 - 2v)$ 4) $3((a-3)^2 - 6q^3) - (-4 - 6q^3 + 4r)$

5) $2x + 15 - 8x +$ $- 9b - 6a^4 - 10b)$

7) $3(s^2 + 3tu - 5)$ $2(9g^4h^3 - 2 + 5gh)$

9) $-6a^5b + 4b(-a^5 + 3c^4 - 2a^5) - 5ab$ 10) $6m^6 - 8n + 3(7m^6 - 5n)$

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

Name : _____

Answer key

Simplify: Multi-variable Expressions

MS5

Simplify each expression.

1) $\frac{1}{3}(9b^3c^5 + 15b^2c^5) + (9b^2c^5 - 15b^3c^5)$

$-12b^3c^5 + 14b^2c^5$

2) $5u^2v^2 - 8uv + 4u^2v^2 - (2uv)^2 - 2uv$

$5u^2v^2 - 10uv$

3) $(s^3 - 4tu^2) - (s^3 - 2tu^2 + 4t^2u^2)$

$-tu^2 - 4t^2u^2$

4) $3((a-3)^2 - 6q^3) - (-4 - 6q^3 + 4r)$

5) $2x + 15 - 8x + 3y^3 - 6x + 8$

$3y^3 - 6x + 8$

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

7) $3(s^2 + 3tu - 5)$

$4s^2 + 8tu - 21$

$-9b - 6a^4 - 10b$

$2(9g^4h^3 - 2 + 5gh)$

$-17g^4h^3 + 3gh + 4$

9) $-6a^5b + 4b(-a^5 + 3c^4 - 2a^5) - 5ab$

$-18a^5b + 12bc^4 - 5ab$

10) $6m^6 - 8n + 3(7m^6 - 5n)$

$27m^6 - 23n$