

Name : _____

Multiplying Binomials

Multi-variable: S1

Multiply the following.

1) $\left(\frac{1}{3}a^2b + 9\right)\left(\frac{1}{3}a^2b + 9\right)$

2) $(11vw - 2)(2 + 11vw)$

3) $(20rs - 8tu)(-1 - 4s)$

4) $(-12x^3 - 6x^2yz)(-6yz - 3x)$

5) $(-21c^4d^5 - 7d^3)(3c^4d^4 - d^2)$

6) $(m + 10n)(-4n + 2m)$

7) $(-2gh + 6)\left(-gh + \frac{1}{2}\right)$

8) $(-9 + 3p^6)(p - q^4)$

Name : _____

Answer key

Multiplying Binomials

Multi-variable: S1

Multiply the following.

1) $\left(\frac{1}{3}a^2b + 9\right)\left(\frac{1}{3}a^2b + 9\right)$

$\frac{1}{9}a^4b^2 + 6a^2b + 81$

2) $(11vw - 2)(2 + 11vw)$

$121v^2w^2 - 4$

3) $(20rs - 8tu)(-1 - 4s)$

$-80rs^2 + 32stu - 20rs + 8tu$

4) $(-12x^3 - 6x^2yz)(-6yz - 3x)$

$36x^2y^2z^2 + 90x^3yz + 36x^4$

5) $(-21c^4d^5 - 7d^3)(3c^4d^4 - d^2)$

$-63c^8d^9 + 7d^5$

6) $(m + 10n)(-4n + 2m)$

$2m^2 - 40n^2 + 16mn$

7) $(-2gh + 6)\left(-gh + \frac{1}{2}\right)$

$2g^2h^2 - 7gh + 3$

8) $(-9 + 3p^6)(p - q^4)$

$-3p^6q^4 + 3p^7 + 9q^4 - 9p$