

6-4 Multiplying Trinomials

Find each product.

1) $-7(-7u^2 - 3uv - 3v^2)$

$49u^2 + 21uv + 21v^2$

2) $-6n(8m^2 - 7mn + 8n^2)$

$-48m^2n + 42mn^2 - 48n^3$

3) $8x^3(-x^2 + 7xy + 6y^2)$

$-8x^5 + 56x^4y + 48x^3y^2$

4) $-5y(3x^2 + 6xy - 6y^2)$

$-15x^2y - 30xy^2 + 30y^3$

5) $(7x + y)(8x^2 - 7xy - 2y^2)$

	$8x^2$	$-7xy$	$-2y^2$
$7x$	$56x^3$	$-49x^2y$	$-14xy^2$
y	$8x^2y$	$-7xy^2$	$-2y^3$

$56x^3 - 41x^2y - 21xy^2 - 2y^3$

6) $(-x - 2y)(-x^2 - 7xy - 5y^2)$

	$-x^2$	$-7xy$	$-5y^2$
$-x$	x^3	$7x^2y$	$5xy^2$
$-2y$	$2x^2y$	$14xy^2$	$10y^3$

$x^3 + 9x^2y + 19xy^2 + 10y^3$

7) $(x - 2y)(-3x^2 + 4xy + y^2)$

	$-3x^2$	$4xy$	y^2
x	$-3x^3$	$4x^2y$	xy^2
$-2y$	$6x^2y$	$-8xy^2$	$-2y^3$

$-3x^3 + 10x^2y - 7xy^2 - 2y^3$

Classify as Monomial, Binomial, or Trinomial.

9) $-3y + z$ Binomial

8) $(5x - 4y)(2x^2 + 7xy + y^2)$

	$2x^2$	$7xy$	y^2
$5x$	$10x^3$	$35x^2y$	$5xy^2$
$-4y$	$-8x^2y$	$-28xy^2$	$-4y^3$

$10x^3 + 29x^2y - 23xy^2 - 4y^3$

10) 5 Monomial

11) $x + 3y + 8z$

Trinomial

12) $-4y - 1$

Binomial

Name each polynomial by degree and number of terms.

13) $b^2 + 5b$

quadratic
binomial

14) $10x^3 - 2$

Cubic
Binomial

15) $-7x^2 - 2x + 4$

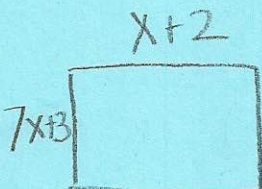
Quadratic
Trinomial

16) $-10m^2 - 10m$

Quadratic
Binomial

Multiplying Binomials

17) A rectangle has a length of $(7x + 3)$ cm. and a width of $(x + 2)$ cm. Find an expression that represents the area of a rectangle. Then simplify.



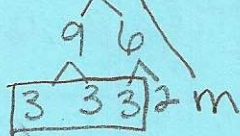
$(7x+3)(x+2)$

	x	2
7x	$7x^2$	$14x$
3	$3x$	6

$= 7x^2 + 17x + 6 \text{ cm}^2$

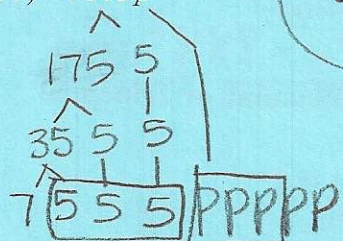
Simplify.

18) $\sqrt[3]{54m}$



$3\sqrt[3]{2m}$

19) $\sqrt[3]{875p^5}$



$5p\sqrt[3]{7p^2}$

Write each expression in radical form.

20) $7^{\frac{1}{2}}$

$\sqrt{7}$