

10.2 Multiplying Polynomials

NOTES

Write your
questions here!



Multiplying a Monomial times a Polynomial

$$-3x^2(4x^3 - 2x^2 + x - 10)$$

Multiplying using a table

$$(2x - 1)(4x + 2)$$

Binomial times a Trinomial

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

Another Way: Multiplying Horizontally

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

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

Try these:

$$(2x - 4)(2x + 4)$$

$$(7g^2 + 4g + 1)(g - 8)$$

SUMMARY:

Now,
summarize
your notes
here!



10.2 Multiplying Polynomials

PRACTICE

DIRECTIONS: Find the product.

1) $x(2x^2 - 3x + 9)$

2) $z^2(4z^4 + z^3 - 11z^2 - 6)$

3) $-a^5(-9a^2 + 5a + 13)$

4) $(x+2)(x-3)$

5) $(4b - 3)(b-7)$

6) $(3k - 1)((3k + 1)$

7) $(y - 6)^2$

8) $(7w + 5)(11w - 3)$

9) $(s + 4)(s^2 + 6s - 5)$

10) $(5x + 2)(-3x^2 + 4x - 1)$

11) $(6z^2 + z - 1)(9z - 5)$

12) $p(2p-3) + (p-3)(p+3)$

13) $-3b^2(b + 11) - (4b - 5)(3b - 2)$

SKILLZ REVIEW

Graph.

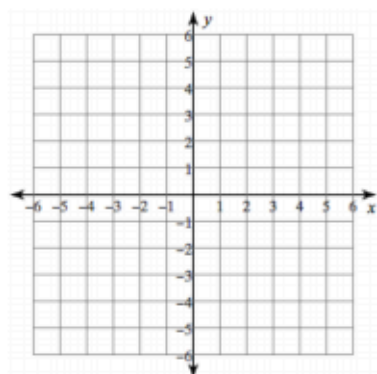
List all pairs of numbers that multiply to the given number.

Which number pair contains the largest perfect square?

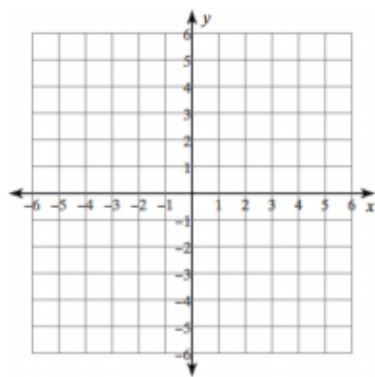
1) $3x + 2y = 8$

2) 24

3) Use 24



4) $3x + 4y = 12$



5) 54

6) Use 54

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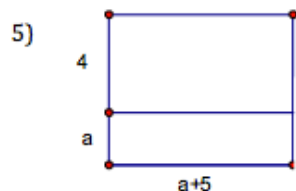
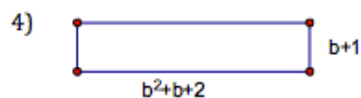
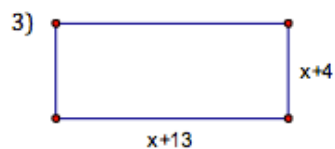
APPLICATION

Directions: Simplify each expression.

1) $2a^4(3a^2 - 5a + 1)$

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

Directions: Write a polynomial that represents the area of each shape.

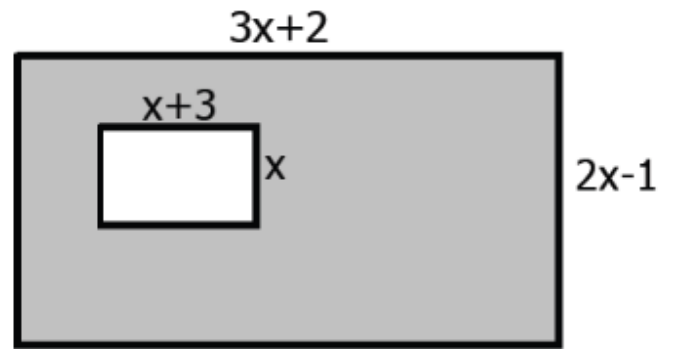


6)

The length of a rectangular box is one inch greater than its width. The height is three times the length. Write an expression that represents the volume of the box.

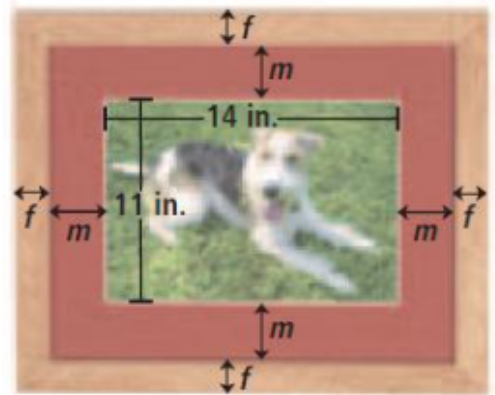
7)

Find the area of the shaded region.



8)

Mina is putting a mat of width m and a frame of width f around an 11-inch by 14-inch picture. Find an expression for the amount of framing material she needs.



9)

A metalworker makes a box from a 15 inches by 20 inches. piece of tin by cutting a square with side length x out of each corner and folding up the sides. Write and simplify an expression for the area of the base of the box.

Diagram: