

Have a Smurfy Valentine's Day!



Warm-Up

1. $(-4x^2 + 9x - 3) - (8x^2 - 3x + 5)$

$$-4x^2 + 9x - 3 - 8x^2 + 3x - 5$$

$$-4x^2 - 8x^2 + 9x + 3x - 3 - 5$$

$$-12x^2 + 12x - 8$$

Find the product or quotient

A. $3(-5x^2 - 10x + 5)$

$$-15x^2 - 30x + 15$$

B. $\frac{-15y^2 - 18y + 12}{3}$

$$\frac{-15y^2}{3} - \frac{18y}{3} + \frac{12}{3}$$

$$-5y^2 - 6y + 4$$

c) $\frac{-3m^2 + 15mn - 21n^2}{-3}$

$$\frac{-3m^2}{-3} + \frac{15mn}{-3} - \frac{21n^2}{-3}$$

$$m^2 - 5mn + 7n^2$$



Divide or multiply each of the following:

A. $(-6q^2 - 10) \div 2$

$$\frac{-6q^2}{2} - \frac{10}{2}$$
$$-3q^2 - 5$$

B. $\frac{4r^2 - 16r + 6}{-2}$

$$\frac{4r^2}{-2} - \frac{16r}{-2} + \frac{6}{-2}$$
$$-2r^2 + 8r - 3$$

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

$$8x^2 - 20x + 12$$

$$\begin{matrix} 3 \times 4 \\ 4 \times 3 \end{matrix}$$

D. $(-9x + 5x^2 - 3)(-5)$

$$(-5)(-9x + 5x^2 - 3)$$
$$45x - 25x^2 + 15$$

a) Which of these **products** is modelled by the algebra tiles below?

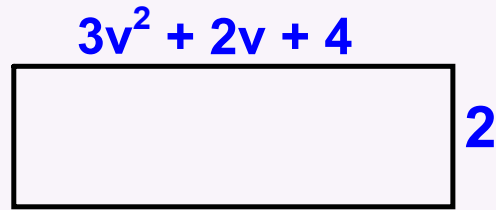
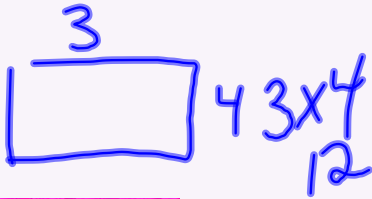
i) $2(-2n^2 + 3n + 4)$

ii) $2(2n^2 - 3n + 4)$

iii) $-2(2n^2 - 3n + 4)$



A. Write the multiplication sentence modelled by the rectangle.



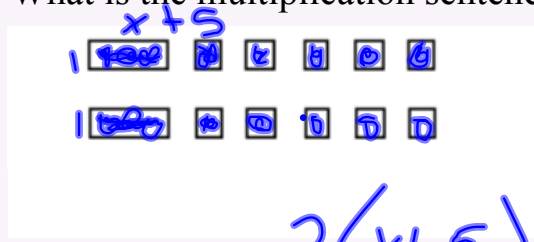
Sentence

$$2(3v^2 + 2v + 4)$$

Product

$$6v^2 + 4v + 8$$

What is the multiplication sentence modelled by this set of algebra tiles?

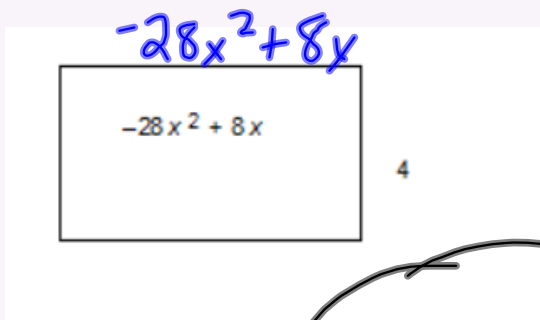


$$2(x+5)$$

$$2x+10$$



Write a division sentence modelled by this rectangle.



Sentence

$$\frac{-28x^2 + 8x}{4}$$

$$-\frac{28x^2}{4} + \frac{8x}{4}$$

Quotient $-7x^2 + 2x$



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9 b

11 a, c, e

14

15 all

16

17 [a, c, d, e]

20



