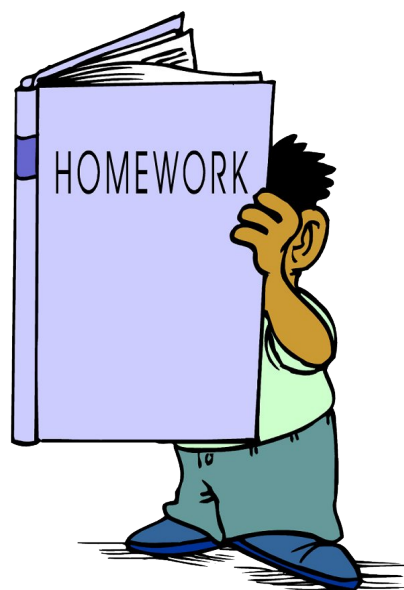


Class/Homework

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7. Use algebra tiles to model each difference of trinomials. Record your answer symbolically.

a) $(3s^2 + 2s + 4) - (2s^2 + s + 1)$ b) $(3s^2 - 2s + 4) - (2s^2 - s + 1)$

c) $(3s^2 - 2s - 4) - (-2s^2 + s - 1)$ d) $(-3s^2 + 2s - 4) - (2s^2 - s - 1)$

8. Use a personal strategy to subtract.

Check your answers by adding.

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

b) $(b^2 + 4b) - (-3b^2 + 7b)$

c) $(-3x + 5) - (4x + 3)$

d) $(4 - 5p) - (-7p + 3)$

$$e) (6x^2 + 7x + 9) - (4x^2 + 3x + 1)$$

$$h) (1 - 3r + r^2) - (4r + 5 - 3r^2)$$

$$f) (12m^2 - 4m + 7) - (8m^2 + 3m - 3)$$

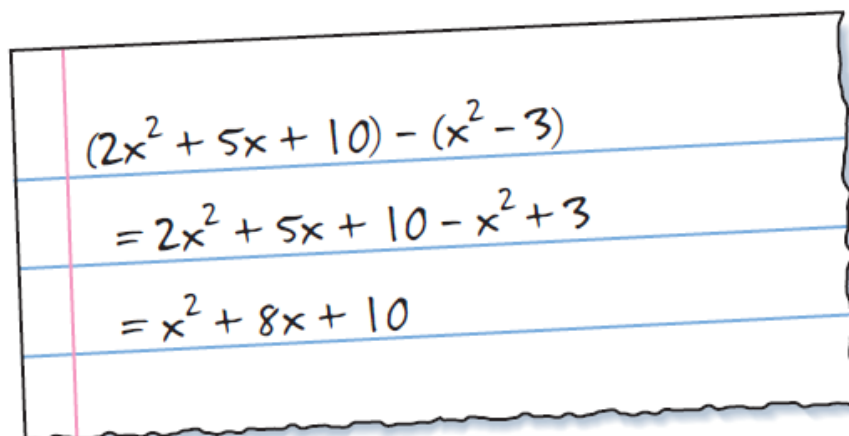
9. The polynomial $4n + 2500$ represents the cost, in dollars, to produce n copies of a magazine in colour. The polynomial $2n + 2100$ represents the cost, in dollars, to produce n copies of the magazine in black-and-white.
- a) Write a polynomial for the difference in the costs of the two types of magazines.

colour copies
cost more

- b) Suppose the company wants to print 3000 magazines. How much more does it cost to produce the magazine in colour instead of black-and-white?

10. A student subtracted

$(2x^2 + 5x + 10) - (x^2 - 3)$ like this:

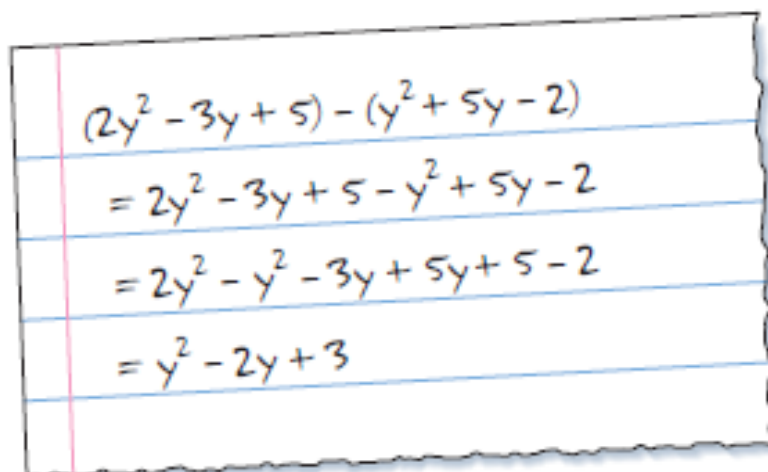


The image shows a piece of lined paper with a red margin line on the left. The student's work is written in black ink on the blue lines. The work shows the subtraction of $(x^2 - 3)$ from $(2x^2 + 5x + 10)$. The student incorrectly distributes the negative sign, resulting in $-x^2 + 3$ instead of $-x^2 - 3$. The final result is $x^2 + 8x + 10$.

$$\begin{aligned}(2x^2 + 5x + 10) - (x^2 - 3) \\= 2x^2 + 5x + 10 - x^2 + 3 \\= x^2 + 8x + 10\end{aligned}$$

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

12. A student subtracted like this:

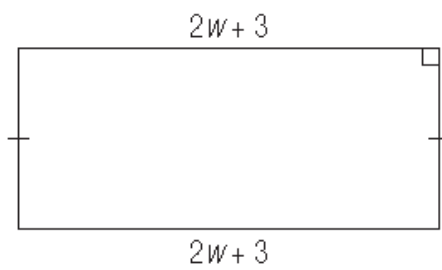


The image shows a piece of lined paper with a red margin line on the left. The student's work is written in blue ink and shows the following steps:

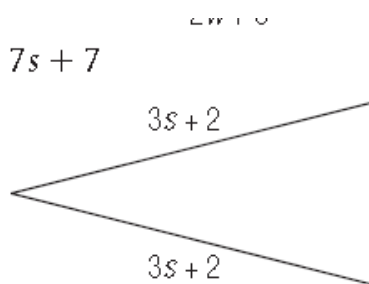
$$\begin{aligned}(2y^2 - 3y + 5) - (y^2 + 5y - 2) \\= 2y^2 - 3y + 5 - y^2 + 5y - 2 \\= 2y^2 - y^2 - 3y + 5y + 5 - 2 \\= y^2 - 2y + 3\end{aligned}$$

13. The perimeter of each polygon is given.
Determine each unknown length.

a) $6w + 14$



b) $7s + 7$



15. Subtract.

a) $(r^2 - 3rs + 5s^2) - (-2r^2 - 3rs - 5s^2)$

c) $(5cd + 8c^2 - 7d^2) - (3d^2 + 6cd - 4c^2)$

d) $(9e + 9f - 3e^2 + 4f^2) -$
 $(-f^2 - 2e^2 + 3f - 6e)$

16. The difference of two polynomials is

$$3x^2 + 4x - 7.$$

One polynomial is $-8x^2 + 5x - 4$.

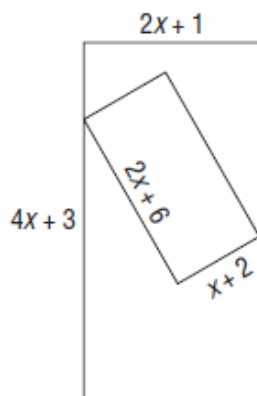
a) What is the other polynomial?

set up like this

Think

Answer

17. The diagram shows one rectangle inside another rectangle. What is the difference in the perimeters of the rectangles?





- 18.** One polynomial is subtracted from another.
The difference is $-4x^2 + 2x - 5$.
Write two polynomials that have this difference. How many different pairs of polynomials can you find? Explain.