

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) $(6x^2 + 7x + 9) - (4x^2 + 3x + 1)$
- f) $(12m^2 - 4m + 7) - (8m^2 + 3m - 3)$
- g) $(-4x^2 - 3x - 11) - (x^2 - 4x - 15)$
- h) $(1 - 3r + r^2) - (4r + 5 - 3r^2)$

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.
- 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:

| |
|--------------------------------|
| $(2x^2 + 5x + 10) - (x^2 - 3)$ |
| $= 2x^2 + 5x + 10 - x^2 + 3$ |
| $= x^2 + 8x + 10$ |

- a) Use substitution to show that the answer is incorrect.
- b) Identify the errors and correct them.

11. **Assessment Focus** Create a polynomial subtraction question. Answer your question. Check your answer. Show your work.

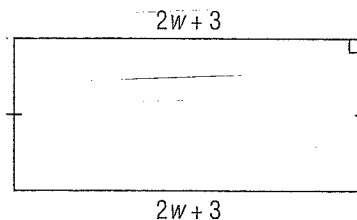
12. A student subtracted like this:

| |
|------------------------------------|
| $(2y^2 - 3y + 5) - (y^2 + 5y - 2)$ |
| $= 2y^2 - 3y + 5 - y^2 + 5y - 2$ |
| $= 2y^2 - y^2 - 3y + 5y + 5 - 2$ |
| $= y^2 - 2y + 3$ |

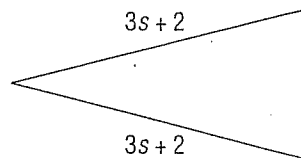
- a) Explain why the solution is incorrect.
- b) What is the correct answer? Show your work.
- c) How could you check that your answer is correct?
- d) What could the student do to avoid making the same mistakes in the future?

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

a) $6w + 14$



b) $7s + 7$



c) $10p + 8$

