

Factor these perfect squares

Practice Makes Perfect... Squares

Name:

1) $49x^2 + 112xy + 64y^2$
2) $9x^2 - 24x + 16$

3) $y^2 - \frac{4}{3}y + \frac{4}{9}$

4) $\frac{4}{9}a^2 + \frac{16}{3}a + 16$

Factor by Completing the Square

5) $x^2 - 10x - 11$

6) $x^2 - 3x - 4$

7) $x^2 + 6x - 1$

8) $x^2 - 3x - 5$

9) $2x^2 - 8x + 8$

10) $2x^2 + 3x + 1$

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

12) $4x^2 - 8x - 12$

13) $6x^2 + x - 2$

For what value of c is each trinomial a perfect square?

14) $cx^2 + 28x + 49$

15) $81a^2 - 36a + c$

Answers

1) $(7x + 8y)^2$

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

3) $\left(y - \frac{2}{3}\right)^2$

4) $\left(\frac{2}{3}a + 4\right)^2$

5) $(x - 11)(x + 1)$

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

7) $(x - 3 - \sqrt{10})(x - 3 + \sqrt{10})$
or $(x - 6.162)(x + 0.162)$

8) $(x - \frac{3}{2} - \sqrt{\frac{29}{4}})(x - \frac{3}{2} + \sqrt{\frac{29}{4}})$
or $(x - 4.193)(x + 1.193)$

9) $2(x - 2)^2$

10) $2(x + \frac{1}{2})(x + 1)$

11) $(x + 2 - \sqrt{7})(x + 2 + \sqrt{7})$
or $(x - 0.646)(x + 4.646)$

12) $4(x + 1)(x - 3)$

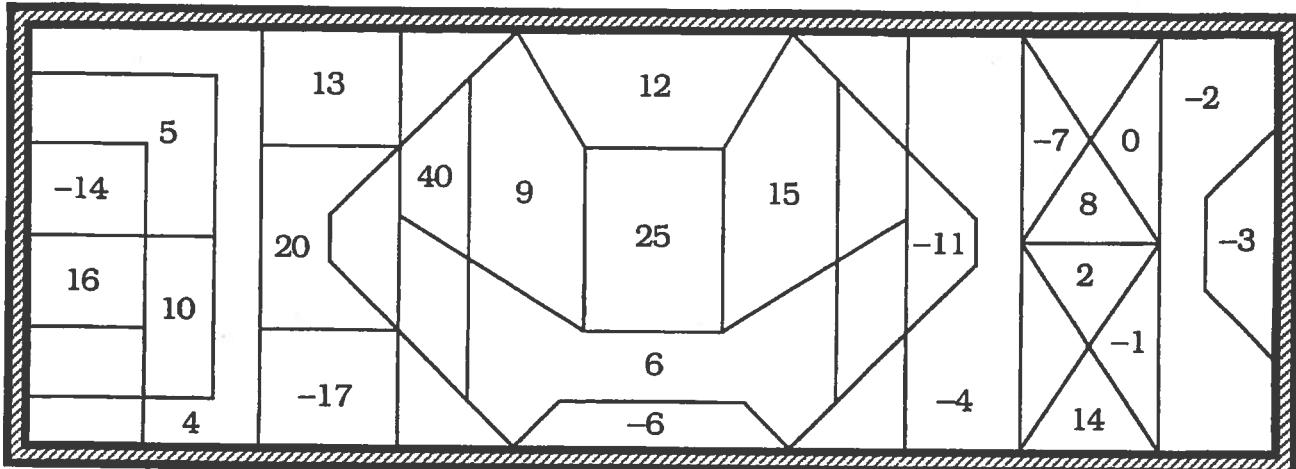
13) $6(x - \frac{1}{2})(x + \frac{2}{3})$

14) $c = 4$

15) $c = 4$

(Look at how to tell
if you have a
perfect square)

WHAT IS HEAVY FORWARD BUT NOT BACKWARD?



Shade in the area containing each solution.

$$1. x + 3(x + 4) = 20$$

$$2. 6(y - 1) + 8 = 32$$

$$3. 5 + 4(n + 9) = -3$$

$$4. 5(k - 2) - 8k = -34$$

$$5. 2 = 11 + 3(m + 3)$$

$$6. -2(p - 5) + 7p = -5$$

$$7. 4a - 2(a + 9) = 6$$

$$8. 7 - 4(d - 3) = 23$$

$$9. 8x - 11(x - 2) = -8$$

$$10. 5 = 6(q - 5) - 19$$

$$11. 3(3 - y) + 1 = 31$$

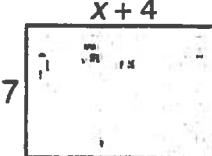
$$12. 5(2v + 4) = 170$$

$$13. 5(4n - 4) = -60$$

$$14. 2(3t - 8) - 4t = 10$$

$$15. 9 - 4(2p - 1) = 45$$

16. Write an equation and solve for x if the area of the rectangle is 70 square units.



17. Write an equation and solve for x if the area of the rectangle is 55 square units.

