

NAME: _____ PERIOD: _____ DATE: _____

Homework Problem Set

Find the missing c in each problem and then rewrite the trinomial as a perfect square binomial.

1. $x^2 + 24x + c$

$$x^2 + 24x + \underline{144}$$

$$c = 144$$

$$(x + 12)^2$$

2. $x^2 + 28x + c$

$$x^2 + 28x + \underline{196}$$

$$c = 196$$

$$(x + 14)^2$$

3. $x^2 - 36x + c$

$$x^2 - 36x + \underline{324}$$

$$c = 324$$

$$(x - 18)^2$$

4. $x^2 - 70x + c$

$$x^2 - 70x + \underline{1225}$$

$$c = 1225$$

$$(x - 35)^2$$

5. $x^2 - 20x + c$

$$x^2 - 20x + \underline{100}$$

$$c = 100$$

$$(x - 10)^2$$

6. $x^2 - 24x + c$

$$x^2 - 24x + \underline{144}$$

$$c = 144$$

$$(x - 12)^2$$

7. $x^2 + 1x + c$

$$x^2 + 1x + \underline{\frac{1}{4}}$$

$$c = \left(\frac{1}{2}\right)^2 = \frac{1}{4}$$

$$\left(x + \frac{1}{2}\right)^2$$

8. $x^2 - 1x + c$

$$x^2 - 1x + \underline{\frac{1}{4}}$$

$$c = \frac{1}{4}$$

$$\left(x - \frac{1}{2}\right)^2$$

9. $x^2 + 5x + c$

$$x^2 + 5x + \underline{\frac{25}{4}}$$

$$c = \left(\frac{5}{2}\right)^2 = \frac{25}{4}$$

$$\left(x + \frac{5}{2}\right)^2$$

10. $x^2 + 9x + c$

$$x^2 + 9x + \underline{\frac{81}{4}}$$

$$c = \left(\frac{9}{2}\right)^2 = \frac{81}{4}$$

$$\left(x + \frac{9}{2}\right)^2$$

Spiral REVIEW—Simplifying Radicals

Simplify each radical expression.

11. $\sqrt{12}$

$$\sqrt{2 \cdot 2 \cdot 3}$$

$$2\sqrt{3}$$

12. $\sqrt{18}$

$$\sqrt{2 \cdot 3 \cdot 3}$$

$$3\sqrt{2}$$

13. $\sqrt{24}$

$$2\sqrt{6}$$

14. $\sqrt{7}$

$$\sqrt{7}$$

15. $\sqrt{36}$

$$6$$

16. $\sqrt{50}$

$$5\sqrt{2}$$

17. $\sqrt{20}$

$$2\sqrt{5}$$

18. $\sqrt{5}$

$$\sqrt{5}$$

Spiral REVIEW—Solving Equations

Solve each equation.

19. $27 = -3 + 5(x + 6)$

$$x = 0$$

20. $-13 = 5(2 + 4m) - 2m$

$$m = -\frac{23}{18}$$

21. $4(-x + 4) = 12$

$$x = 1$$

22. $-2 = -(n - 8)$

$$n = 10$$

23. $-6(1 - 5v) = 54$

$$v = 2$$

24. $8 = 8v - 4(v + 8)$

$$v = 10$$

25. $10(1 + 3b) = -20$

$$b = -1$$

26. $-5n - 8(1 + 7n) = -8$

$$n = 0$$

27. $8(4k - 4) = -5k - 32$

$$k = 0$$