

Simplify each expression.

1.  $-5 - (6 - 8)$

2.  $10 - 2(4 - 1)$

3.  $4 + 2(-2 - 3)$

4.  $3(2 + 4) - 4(6 - 2)$

5.  $4^2 - 3^2$

6.  $-3^2 - 4^2$

7.  $-5^2 + (-4)^2$

8.  $-5(2)^2 + 2(6 - 9)$

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

10.  $-(2 - 6)^2 - 4^2$

11.  $\frac{-2(4 + 2)}{3(4 - 2)}$

12.  $\frac{2(4) + 5(2)}{3(-2)}$

If  $A = -3$  and  $B = 2$  and  $C = 4$  and  $D = -4$  then evaluate each expression.

13.  $-AD - C$

14.  $-AB - D$

15.  $-2B + 3C + D$

16.  $2AC - 4A$

17.  $-BA^2$

18.  $A^2 - 5C$

19.  $C^2 - B^2$

20.  $\frac{-2A + 3B}{-B}$

21.  $\frac{3B + 3C}{2A}$

22. Evaluate  $-x^2 - 3x - 5$  for  $x = -2$

23. Evaluate  $-2xy + 2y^2$  for  $x = -3$  and  $y = 2$

24. Evaluate  $x^2 - 2x - 14$  for  $x = -4$

25. Evaluate  $3x - y^2$  for  $x = -2$  and  $y = -3$

26. Evaluate  $x^2 - x - 15$  for  $x = -5$

27. Evaluate  $6x - 8y$  for  $x = \frac{2}{3}$  and  $y = \frac{3}{4}$

28. Evaluate  $\frac{5}{3}x - 5$  for  $x = -6$

29. Evaluate  $3xy - 8y$  for  $x = 0$  and  $y = -2$

30. Find the perimeter of a rectangle if

$$P = 2W + 2L \text{ and}$$

$$W = 5 \text{ yd.}, L = 10 \text{ yd.}$$

31. Find the area of a triangle if

$$A = \frac{1}{2}bh \text{ and}$$

$$b = 15 \text{ in.}, h = 4 \text{ in.}$$

32. Find the area of a trapezoid if

$$A = \frac{h(B+b)}{2} \text{ and}$$

$$h = 5 \text{ in.}, B = 7 \text{ in. } b = 9 \text{ in.}$$

33. Find the volume of a rectangular Solid if

$$V = L \cdot W \cdot H \text{ and}$$

$$L = 12 \text{ ft.}, W = 2 \text{ ft.}, H = 10 \text{ ft.}$$

34. Find the Volume of a Cube if

$$V = s^3 \text{ and}$$

$$s = 5 \text{ in.}$$

35. Find the Volume of a Square Pyramid if

$$V = \frac{1}{3} \cdot s^2 \cdot h \text{ and}$$

$$s = 9 \text{ ft. and } h = 2 \text{ ft.}$$

36. Find the exact circumference of a circle

$$\text{if } C = 2 \cdot \pi \cdot r$$

$$\text{and } r = 8 \text{ yards}$$

37. Find the exact circumference of a circle

$$\text{if } C = \pi \cdot d$$

$$\text{and } d = 4 \text{ ft.}$$

38. Find the exact area of a circle

$$\text{if } A = \pi \cdot r^2$$

and  $r = 3$  ft.

39. Find the exact volume of a sphere

$$\text{if } V = \frac{4}{3} \cdot \pi \cdot r^3$$

and  $r = 3$  in.

40. Find the exact volume of a cone

$$\text{if } V = \frac{1}{3} \cdot \pi \cdot r^2 \cdot h$$

and  $r = 6$  ft and  $h = 2$  ft.

41. Find the exact volume of a circular cylinder

$$\text{if } V = \pi \cdot r^2 \cdot h$$

and  $r = 5$  in. and  $h = 2$  in.

### Answers Review Chapters 3, 4 and 5

- |                    |                     |                     |                     |         |        |        |         |
|--------------------|---------------------|---------------------|---------------------|---------|--------|--------|---------|
| 1. -3              | 2. 4                | 3. -6               | 4. 2                | 5. 7    | 6. -25 | 7. -9  | 8. -26  |
| 9. 20              | 10. -32             | 11. -2              | 12. -3              | 13. -16 | 14. 10 | 15. 4  | 16. -12 |
| 17. -18            | 18. -11             | 19. 12              | 20. -6              | 21. -3  | 22. -3 | 23. 20 | 24. 10  |
| 25. -15            | 26. 15              | 27. -2              | 28. -15             | 29. 16  |        |        |         |
| 30. 30 yd.         | 31. 30 sq. in.      | 32. 40 sq. in.      | 33. 240 cu. ft.     |         |        |        |         |
| 34. 125 cu. in.    | 35. 54 cu. ft.      | 36. $16\pi$ yd.     | 37. $4\pi$ ft.      |         |        |        |         |
| 38. $9\pi$ sq. ft. | 39. $36\pi$ cu. in. | 40. $24\pi$ cu. ft. | 41. $50\pi$ cu. in. |         |        |        |         |