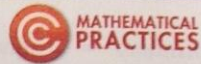


Practice and Problem-Solving Exercises



Multiply, if possible. Then simplify.

10.  $\sqrt{8} \cdot \sqrt{32}$

13.  $\sqrt[4]{8} \cdot \sqrt[3]{32}$

16.  $\sqrt[3]{9} \cdot \sqrt[3]{-24}$

11.  $\sqrt[3]{4} \cdot \sqrt[3]{16}$

14.  $\sqrt{-5} \cdot \sqrt{5}$

17.  $\sqrt[3]{-12} \cdot \sqrt[3]{-18}$

12.  $\sqrt[3]{9} \cdot \sqrt[3]{-81}$

15.  $\sqrt[3]{-5} \cdot \sqrt[3]{-25}$

18.  $\sqrt{50} \cdot \sqrt{75}$

See Problem 1.

Simplify.

19.  $\sqrt{20x^3}$

22.  $\sqrt[3]{32a^5}$

25.  $\sqrt[3]{-250x^6y^5}$

20.  $\sqrt[3]{81x^3}$

23.  $\sqrt[3]{54y^{10}}$

26.  $\sqrt[4]{64x^3y^6}$

21.  $\sqrt{50x^5}$

24.  $\sqrt{200a^6b^7}$

27.  $\sqrt[5]{-32x^6y^7}$

See Problem 2.

Multiply and simplify.

28.  $\sqrt[3]{6} \cdot \sqrt[3]{16}$

31.  $4\sqrt{2x} \cdot 5\sqrt{6xy^2}$

34.  $\sqrt[4]{81x^5y^4} \cdot \sqrt[4]{32x^3y}$

29.  $\sqrt{8y^5} \cdot \sqrt{40y^2}$

32.  $3\sqrt[3]{5y^3} \cdot 2\sqrt[3]{50y^4}$

35.  $2\sqrt[3]{2xy^2} \cdot \sqrt[3]{4x^2y^5}$

30.  $\sqrt{8x^5} \cdot \sqrt{3x}$

33.  $-\sqrt[3]{2x^2y^2} \cdot 2\sqrt[3]{15x^5y}$

36.  $3\sqrt[4]{18a^9} \cdot \sqrt[4]{6ab^2}$

See Problem 3.

Divide and simplify.

37.  $\frac{\sqrt{500}}{\sqrt{5}}$

40.  $\frac{\sqrt[3]{250x^7y^3}}{\sqrt[3]{2x^2y}}$

38.  $\frac{\sqrt{48x^3}}{\sqrt{3xy^2}}$

41.  $\frac{\sqrt[3]{48x^3y^2}}{\sqrt[3]{6x^4y}}$

39.  $\frac{\sqrt{56x^5y^5}}{\sqrt{7xy}}$

42.  $\frac{\sqrt{20ab}}{\sqrt{45a^2b^3}}$

See Problem 4.

Rationalize the denominator of each expression.

43.  $\frac{\sqrt{x}}{\sqrt{2}}$

46.  $\frac{\sqrt[3]{5}}{\sqrt[3]{3x}}$

49.  $\frac{\sqrt{3xy^2}}{\sqrt{5xy^3}}$

44.  $\frac{\sqrt{5}}{\sqrt{8x}}$

47.  $\frac{\sqrt[4]{2}}{\sqrt[4]{5}}$

50.  $\frac{\sqrt{5x^4y}}{\sqrt{2x^2y^3}}$

45.  $\frac{\sqrt[3]{x}}{\sqrt[3]{2}}$

48.  $\frac{15\sqrt{60x^5}}{3\sqrt{12x}}$

51.  $\frac{\sqrt[3]{12ab^3c^2}}{\sqrt[3]{10a^3bc}}$

See Problem 5.