

LESSON PRACTICE

6A

Simplify.

1. $(16^{1/2})^3$

2. $(x^{3/4})^{8/3}$

3. $(2^6)^{1/3}$

4. $[(-4)^2]^{3/4}$

5. $(3^{-4})^{1/2}$

6. $\left[\left(\frac{4}{9}\right)^{1/2}\right]^3$

7. $\left(\frac{1}{2}\right)^{-3}$

8. $(x^{AB})^{1/A}$

9. $[(-6)^2]^{1/2}$

10. $(27^{2/3})^2$

Rewrite using fractional exponents, and then simplify.

11. $\sqrt{\sqrt{X}}$

12. $(\sqrt[3]{125})^2$

13. $\sqrt[3]{B^5}$

14. $\sqrt{\sqrt[3]{64}}$

15. $(\sqrt{36})^3$

16. $\sqrt{\sqrt{25}}$

17. $(\sqrt[6]{64})^{-3}$

18. $\sqrt[4]{81}$

19. $\sqrt{\sqrt{A^{16}}}$

20. $(\sqrt[3]{8})^5$

SYSTEMATIC REVIEW

6E

Simplify.

1. $(49^{1/2})^3$

2. $(125)^{4/3}$

3. $(1,000^{5/3})$

4. $(-32^{3/5})^2$

Rewrite using fractional exponents, and then simplify.

5. $\sqrt{\sqrt{81}}$

6. $(\sqrt{36})^3$

7. $\sqrt[4]{x^8}$

8. $(\sqrt[3]{1000})^{-5}$

Find the factors.

9. $x^2 - 4x + 4$

10. $x^2 + 10x + 25$

11. $x^2 - 12x + 36$

12. $3x^2 + 14x - 5$

Solve by factoring to find the roots, and then check your answers in the original equation.

13. $42 - 3X^2 = 15X$

14. $X^2 - 25 = X - 5$

Combine.

15. $\frac{8}{3X} - \frac{2}{2X} - \frac{5}{6X^2} =$

16. $\frac{X-3}{X-2} - \frac{4X+3}{X^2-4} - \frac{X+3}{X+2} =$

17. $\frac{\frac{1}{9} - \frac{X}{3}}{\frac{X}{12} + \frac{5}{8}} =$

18. $\frac{X^2 - 6X - 16}{X + 2} \div \frac{X^2 - 8X + 16}{X - 4} =$

Simplify.

19. $\frac{\sqrt{5}}{\sqrt{3}}$

20. $\frac{1}{\sqrt{7}} - \frac{2}{\sqrt{8}}$