LESSON PRACTICE

7A

Simplify.

1. $\sqrt{-1}$

2. $\sqrt{-49}$

3. $\sqrt{-64x^6}$

4. $\sqrt{\frac{-121}{144}}$

5. $\sqrt{-4} + \sqrt{-100}$

6. $2\sqrt{-9} + \sqrt{36}$

7. $\sqrt{-20x^2}$

8. $\sqrt{-A} + \sqrt{-B}$

Simplify, and combine like terms when possible. Always factor out the *i* first when multiplying the square roots of negative numbers.

9. $3\sqrt{-12} + 4\sqrt{-162} =$

10. $13\sqrt{-1} - 2\sqrt{-81}$

11. $2\sqrt{-25} + \sqrt{16} =$

12. $\sqrt{3x^2} + \sqrt{4i^2} =$

13. $i \cdot i \cdot i \cdot i =$

14. $i \cdot i \cdot i \cdot i \cdot i \cdot i^3 =$

15. $i^5 =$

16. $(i^3)^3 =$

17. $(15i)(-8i) =$

18. $3i\sqrt{-169}$

19. $\sqrt{-6}\sqrt{-6} =$

20. $(2\sqrt{225})(6\sqrt{-4})$

SYSTEMATIC REVIEW

7E

Simplify.

1. $\sqrt{-4}$

2. $\sqrt{-121}$

3. $\sqrt{-x^2}$

4. $\sqrt{\frac{-81}{4}}$

5. $\sqrt{-16} + \sqrt{25}$

6. $\sqrt{-81} + \sqrt{-1}$

Simplify, and combine like terms when possible.

7. $5\sqrt{-12} + 7\sqrt{-75}$

8. $(10i)(10i)(2i)$

9. $(i \cdot i \cdot i \cdot 3i)$

10. $\left(6\sqrt{25}\right)\left(5\sqrt{-16}\right)$

Simplify.

11. $(x^3)^{2/3}(x^5)^{4/5}$

12. $(x^0)^2(x^{3/3})^{1/3}$

Rewrite using fractional exponents, and then simplify.

13. $\left(\sqrt[3]{8}\right)^{-2}$

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

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

15. $4/25\ X^2 = 1$

16. $9/4\ X^2 - 4 = 0$

Simplify.

17. $\dfrac{2x^2+2X-4}{5X-5} \div \dfrac{6X^2-6X-36}{3X+15} =$

18. $\sqrt{\dfrac{4}{7}} - \sqrt{\dfrac{1}{4}} =$

Solve using scientific notation.

19. $(.0000007)(.0018) \div (3{,}000) =$

Simplify.

20. $-\dfrac{4X}{A} - \dfrac{AA^0}{A^2X^{-1}} + \dfrac{5A^{-2}}{X}$