LESSON PRACTICE

8A

Find the conjugate.

1. $A + B$

2. $3X - 8$

3. $6 + \sqrt{2}$

4. $1 - 5i$

Multiply.

5. $(2B + 4)(2B - 4)$

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

7. $(2 + 7i)(2 - 7i)$

8. $\left(4+\sqrt{7}\right)\left(4-\sqrt{7}\right)$

Use the conjugate to simplify the rational expression (put it in standard form).

9. $\frac{X}{3+4i}$

10. $\frac{11}{2+i}$

11. $\frac{4i}{6-3i}$

12. $\frac{i^2}{4+5i}$

13. $\frac{Z}{Z+\sqrt{5}}$

14. $\frac{8}{8-\sqrt{8}}$

15. $\frac{7X}{2-2\sqrt{X}}$

16. $\frac{3}{8i+i\sqrt{2}}$

SYSTEMATIC REVIEW

8E

Find the conjugate.

1. $3 - 2i$

2. $4 - 5\sqrt{8}$

Multiply.

3. $(A + 14i)(A - 14i)$

4. $\left(2X + \sqrt{3}\right)\left(2X - \sqrt{3}\right)$

Find the factors.

5. $16X^2 - 15 = 0$

6. Solve for X in #5.

7. $5X^2 - 10 = 0$

8. Solve for X in #7.

Simplify, and combine like terms when possible.

9. $11\sqrt{-12} + 6\sqrt{-3}$

10. $(-3i)\left(5\sqrt{-81}\right)$

11. $\sqrt{-196} \div 2i$

12. $i^4 \cdot i^4$

Simplify.

13. $(8^2+15^2)^{3/2}$

14. $\left(\sqrt[3]{64}\right)^{3/2}$

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

15. $\frac{4}{3}X^2 = \frac{4}{3}X + 5$

16. $8 - 6X = 3X^2 + X + 10$

Simplify.

17. $\frac{X^2+2X-24}{X^2+8X+12} \div \frac{X^2-8X+16}{X^2+4X+4} =$

18. $\sqrt{\frac{1}{2A}} - \sqrt{\frac{3}{2}} =$

19. $\frac{3^{-1}X^{-4}Y^3X^2}{3^0Y^{-1}Y^2} =$

20. $\frac{3X + \frac{5X+8}{3X}}{2 - \frac{4}{X^2}} =$