LESSON PRACTICE

12A

Find the roots, using the quadratic formula when necessary.

1. $X^2 + 6X + 2 = 0$

2. $X^2 - 5X + 4 = 0$

3. $3X^2 + 7X - 1 = 0$

4. $A^2 - 10A = 11$

5. $2Q^2 + 2 = 17Q$

6. $5X^2 + 15X + 10 = 0$

7. $1/4\ R^2 - 1/2\ R + 3/2 = 0$

8. $16X^2 = 2X + 4$

9. $2X^2 + 3X - 8 = 0$

10. $Y^2 = 3/4\ Y + 2$

Find the roots, using the quadratic formula when necessary.

1. $X^2 + 2X - 8 = 0$

2. $X^2 - 6X = -8$

3. $2X^2 - 15X + 7 = 0$

4. $3X^2 + 4X = 7$

5. $2 = 5X + X^2$

6. $X^2 + 2X - 15 = 0$

Complete the square.

7. $4X^2 + 28X + \_\_\_\_$

8. $9X^2 - 36X + \_\_\_\_$

9. $36X^2 + \_\_\_\_ + 25$

10. $81X^2 - \_\_\_\_ + 121$

Solve for X. Complete the square when necessary.

11. $X^2 + 5X - 14 = 0$

12. Check the answers to #11 by placing them in the original equation.

13. Expand $(2X + 1)^5$.

14. What is the third term of $(1/3\ X + 2)^5$?

15. Expand $(X - 3/5)^3$.

16. Find the cube root of $8X^3 + 12X^2 + 6X + 1$.

Put in standard form.

17. $\frac{10+i}{5i}$

18. $\frac{10}{5-\sqrt{8}}$

Simplify, and combine like terms when possible.

19. $\frac{2+3\sqrt{6}}{1-\sqrt{6}}$

20. $\frac{6-\sqrt{2}}{10\sqrt{3}-8}$