

For questions [A-1] 9-15 and [A-2] 8-15, use either

table of square roots in the textbook or a calculator

to obtain the decimal approximations of irrational answers:

Exercises [A-1]

Solve by the formula, giving irrational answers in simplest radical form:

$$1. x^2 + 3x + 1 = 0$$

$$2. 2x^2 + 3 = 8x$$

$$3. 3x^2 - 2 = 11x$$

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

$$5. 4y^2 = 3 - 13y$$

$$6. 18z^2 + 44z = 45$$

$$7. \frac{2}{x} - \frac{1}{3x+4} = \frac{1}{4}$$

$$8. \frac{2x}{x+1} - \frac{x+1}{x} = 0$$

Solve by the formula, giving irrational answers to the nearest hundredth:

$$9. 16y^2 - 8y - 1 = 0$$

$$10. x^2 + 24x = 36$$

$$11. x^2 + 5x + 3 = 0$$

$$12. 12x^2 + 6x = 5$$

$$13. 5x^2 - 7x - 2 = 0$$

$$14. x^2 = 3x + 6$$

$$15. 2y^2 - 1.6y - 1.2 = 0$$

Exercises [A-2]

Solve by the formula, giving irrational answers in simplest radical form:

$$1. z^2 + 2z - 1 = 0$$

$$2. 5k^2 = 11k + 3$$

$$3. 7y^2 = 5 - 6y$$

$$4. 3x^2 - 10x = 3$$

$$5. 6x^2 + 10 = 19x$$

$$6. x = \frac{7}{x-4}$$

$$7. \frac{2}{z+2} - \frac{1}{z-4} = 2$$

Solve by the formula, giving irrational answers to the nearest hundredth:

$$8. x^2 - x - 3 = 0$$

$$9. 4z^2 - 16z + 13 = 0$$

$$10. 2z^2 + 5 = 8z$$

$$11. 5b^2 = 1 + 6b$$

$$12. 15k^2 = 13k - 2$$

$$13. 5y^2 + 6y = .2$$

$$14. 5c^2 - 7c = 1$$

$$15. x^2 - 50x - 100 = 0$$

Page 470 (middle)

1. $\frac{-3 \pm \sqrt{5}}{2}$

2. $\frac{4 \pm \sqrt{10}}{2}$

3. $\frac{11 \pm \sqrt{145}}{6}$

4. $\frac{1}{4}, 2$

5. $\frac{-13 \pm \sqrt{217}}{8}$

6. $\frac{-22 \pm \sqrt{1294}}{18}$

7. $\frac{8 \pm 4\sqrt{10}}{3}$

8. $1 \pm \sqrt{2}$

9. 0.60, -0.10

10. 1.42, -25.42

11. -4.30, -0.70

12. -0.94, 0.44

13. 1.64, -0.24

14. 4.37, -1.37

15. 1.27, -0.47

Page 470 (bottom)

1. $-1 \pm \sqrt{2}$

2. $\frac{11 \pm \sqrt{181}}{10}$

3. $\frac{-3 \pm 2\sqrt{11}}{7}$

4. $\frac{5 \pm \sqrt{34}}{3}$

5. $\frac{2}{3}, \frac{5}{2}$

6. $2 \pm \sqrt{11}$

7. $\frac{5 \pm \sqrt{73}}{4}$

8. 2.30, -1.30

9. 2.87, 1.13

10. 3.22, 0.78

11. 1.35, -0.15

12. $\frac{1}{5}, \frac{2}{3}$

13. -1.23, 0.03

14. 1.53, -0.13

15. -1.93, 51.93