Algebra I

Final Exam Review
Answers

Chapter 10

1. - Factor
   - Square Root Method
   - Graphing
   - Completing the Square
   - Quadratic Formula

2. $x = \pm 2$

3. $x = \pm\sqrt{6}$

4. $x = -3 \pm \sqrt{10}$

5. $x = -\frac{3}{2} \pm \sqrt{\frac{29}{4}} = -\frac{3}{2} \pm \frac{\sqrt{29}}{2}$

6. $x = \frac{7 \pm \sqrt{181}}{-6}$

7. $x = \frac{-6 \pm \sqrt{76}}{2}$

8. $x = \pm\sqrt{3}$

9. $x = -4, 3$

10. $x = \frac{-8 \pm \sqrt{40}}{6}$

11. $x = 0, 2$

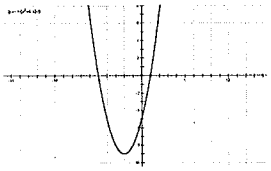
12. *two solutions*

13. *one solution*

14. *no solution*

15.

X	y
-4	-5
-3	-8
-2	-9
-1	-8
0	-5



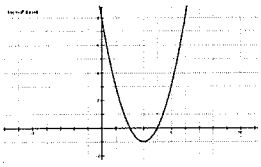
Opens: Up
Vertex:(-2,-9)

Solutions: -5, 1

Axis of Symmetry
x = -2

16.

X	y
1	3
2	0
3	-1
4	0
5	3



Opens: Up
Vertex:(3,-1)

Solutions: 2, 4

Axis of Symmetry
x = 3

Chapter 11

1. $\sqrt{48} = \sqrt{16 \cdot 3} = 4\sqrt{3}$

2. $\sqrt{250} = 5\sqrt{10}$

3. $\sqrt{2} \cdot 2\sqrt{3} = 2\sqrt{6}$

4. $\sqrt{\frac{16}{25}} = \frac{4}{5}$

5. $\frac{3}{\sqrt{2}} = \frac{3\sqrt{2}}{2}$

6. $\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

7. $\sqrt{4} \cdot 3\sqrt{2} = 6\sqrt{2}$

8. $4\sqrt{6} \cdot -2\sqrt{3} = -8\sqrt{18} = -24\sqrt{2}$

9. $-4\sqrt{6} + 6\sqrt{3}$

10. $2 + 4\sqrt{2}$

11. $4\sqrt{6} - \sqrt{54} = 4\sqrt{6} - 3\sqrt{6} = \sqrt{6}$

12. $x = 14$

13. $x = 27$

14. No Solution

15. $x = 2$

16. $x = -2, x = 8$

17. $x = 5$
    -2 *is extraneous.*

18. $\sqrt{26}$

19. $\sqrt{65}$

Chapter 12

20. $\sqrt{5}$

21. $\sqrt{10}$

22. (3,6)

23. (–9,8)

1. $y=\frac{10}{x}; y=5$

2. $y=\frac{24}{x}; y=12$

3. $y=\frac{-18}{x}; y=-9$

4. $3x+5$

5. $x-4+\frac{-1}{x-1}$

6. $\frac{x}{x+2}$

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

8. $\frac{x-3}{x+4}$

9. $\frac{x-3}{2(x-1)}$

10. $\frac{x+2}{x-3}$

11. $\frac{x-1}{x+1}$

12. $-\frac{x-3}{x+3}$

13. $\frac{3}{2x}$

14. $\frac{11t+2}{(t+2)(t-2)}$

15. $\frac{-2}{(x-1)(x-3)}$

16. { 5 }

17. { 5, 1/5 }

18. {-1/2 }

19. {-3, -3/7 }