***College Algebra, 5e* (Young)**

**Chapter 1 Equations and Inequalities**

1.3 Quadratic Equations

1) Solve by factoring.

(x) with superscript (2) + 2*x* = 48

A) {-6, 8}

B) {6, -8}

C) {-6, -8}

D) {6, 8}

Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

2) Solve by factoring.

3(x) with superscript (2) + 20 *=* 19*x*

A){-4/3, 5}

B) {4/3, 5}

C) {3/4, 5}

D) {-3/4, 5}

Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

3) Solve by factoring.

(x) with superscript (2) = 9

A) {-3, 3}

B) {-3}

C) {3}

D) {9, -9}

Answer: A

Diff: 1 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the square root method to solve quadratic equations.

4) Solve by factoring.

5*x* + (4/x) = 9

A) {-4/5, -1}

B) {5/4, 1}

C) {4/5, 1}

D) {-5/4, -1}

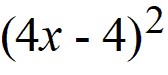
Answer: C

Diff: 2 Var: 1

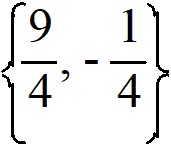
Chapter/Section: Ch 01, Sec 03

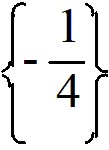
Learning Objective: Use the Quadratic Formula to solve quadratic equations.

5) Solve using the square root method.

 = 25

A) 

B) 

C) 

D) 

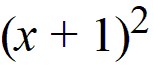
Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the square root method to solve quadratic equations.

6) Solve using the square root method.

 = 15

A) {1 + , 1 - }

B) {-1 + }

C) {-1, }

D) {-1 + , -1 - }

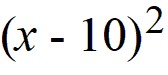
Answer: D

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the square root method to solve quadratic equations.

7) Solve using the square root method.

 = -49

A) {10 + 7*i*, 10 - 7*i*}

B) {10 + 7*i*}

C) {17}

D) {17, 3}

Answer: A

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the square root method to solve quadratic equations.

8) What number should be added to complete the square of the expression?

(x) with superscript (2) + 2.9*x*

A)2.1025

B) 1.45

C) 5.8

D) 8.41

Answer: A

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by completing the square.

9) What number should be added to complete the square of the expression?

(x) with superscript (2) - 7*x*

A)49

B) 7/2

C) 49/4

D) 14

Answer: C

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by completing the square.

10) What number should be added to complete the square of the expression?

(x) with superscript (2) + (3/5)*x*

A)9/100

B) 9/25

C) 3/100

D) 3/25

Answer: A

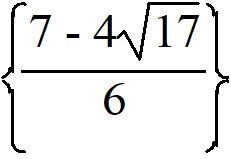
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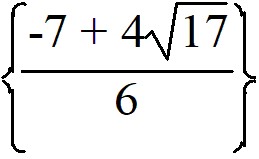
Chapter/Section: Ch 01, Sec 03

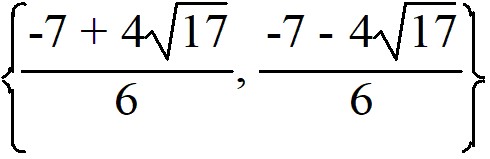
Learning Objective: Solve quadratic equations by completing the square.

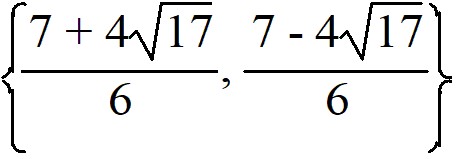
11) Solve using the quadratic formula.

36(y) with superscript (2) - 84*y* - 223 = 0

A) 

B) 

C) 

D) 

Answer: A

Diff: 2 Var: 1

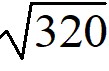
Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

12) Determine the discriminant:

8(x) with superscript (2) - 8*x* - 8 = 0

A) 320

B) 

C) -248

D) 264

Answer: A

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

13) Determine the discriminant:

(x) with superscript (2) + 4*x* + 6 = 0

A) 

B) -8

C) 8

D) -8*i*

Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

14) Determine the number and type of root to expect. Do not solve.

3(x) with superscript (2) - 8*x* + 4 = 0

A) two complex roots

B) two distinct real roots

C) one real root

Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

15) Determine the number and type of root to expect. Do not solve.

(x) with superscript (2) - 12*x* + 36 = 0

A) two complex roots

B) two distinct real roots

C) one real root

Answer: C

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

16) Solve by factoring.

6(x) with superscript (2) - 150 = 0

Answer: {-5, 5}

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

17) Solve using the quadratic formula. Express your answer as a decimal to two decimal places.

0.1(x) with superscript (2) + 1.0*x* - 0.6 = 0

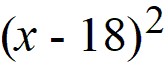
Answer: {0.57, -10.57}

Diff: 3 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

18) Solve using the square root method.

 = 144

Answer: {6, 30}

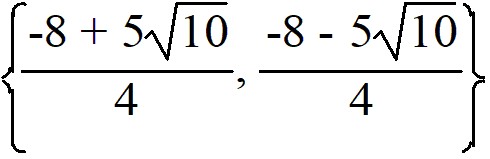
Diff: 2 Var: 1

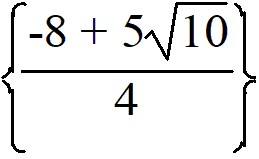
Chapter/Section: Ch 01, Sec 03

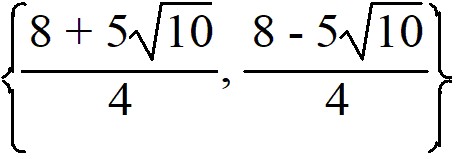
Learning Objective: Use the square root method to solve quadratic equations.

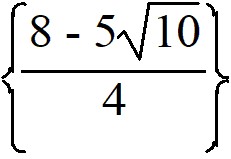
19) Solve using the quadratic formula.

16(y) with superscript (2) - 64*y* - 186 = 0

A) 

B) 

C) 

D) 

Answer: C

Diff: 3 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

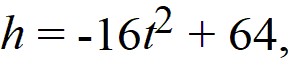
20) The area of a rectangle is 154 square feet. The width is 3 feet less than the length. Find the dimensions of the rectangle.

Answer: 14 ft by 11 ft

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

21) If a person drops a water balloon off the rooftop of a 64 foot building, the height of the water balloon is given by the equation ** where t is in seconds. When will the water balloon hit the ground? Round to 2 decimal places if necessary.

Answer: 2 seconds

Diff: 1 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

22) Solve (c) with superscript (2) - 16 = 0 for *c*.

A) {-4}

B) {4}

C) {-4, 4}

D) no solution

Answer: C

Diff: 1 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

23) Solve (z) with superscript (2) = 36*z* for *z*.

A) {-6}

B) {0, 36}

C) {-6, 6}

D) {6}

Answer: B

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Solve quadratic equations by factoring.

24) Solve (b) with superscript (2) + 81 = 0 for *b*.

A) {-9}

B) {9}

C) {-9, 9}

D) {-9*i*, 9*i*}

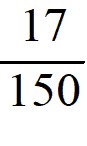
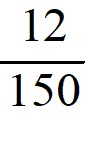
Answer: D

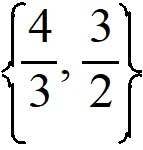
Diff: 1 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the square root method to solve quadratic equations.

25) Solve using any method.

(1/25)(x) with superscript (2) - *x* + 

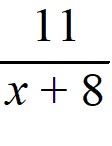
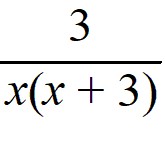
Answer: 

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Choose the appropriate method for solving quadratic equations.; Use the Quadratic Formula to solve quadratic equations.

26) Solve using any method. Round to two decimal places if necessary.

 + (5/x) = 

Answer: {-2.96, -1.28}

Diff: 2 Var: 1

Chapter/Section: Ch 01, Sec 03

Learning Objective: Use the Quadratic Formula to solve quadratic equations.

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