

MA 90 Exercises for section 6.7 Solving Equations by Factoring**Short Answer**

1. The equation is already in factored form. Use the special zero factor property to set the factors to 0 and solve.

$$(x + 1)(x - 2) = 0$$

$$x = \underline{\hspace{2cm}}$$

2. The equation is already in factored form. Use the special zero factor property to set the factors to 0 and solve.

$$x(x + 3)(x - 2) = 0$$

$$x = \underline{\hspace{2cm}}$$

3. The equation is already in factored form. Use the special zero factor property to set the factors to 0 and solve.

$$4y(3y + 1)(7y + 5) = 0$$

$$y = \underline{\hspace{2cm}}$$

Name: _____

ID: A

4. Solve the equation.

$$x^2 - x - 6 = 0$$

.

5. Solve the equation.

$$x^2 + 7x + 12 = 0$$

$$x = \underline{\hspace{2cm}}$$

.

6. Solve the equation.

$$x^2 - 5x + 4 = 0$$

$$x = \underline{\hspace{2cm}}$$

Name: _____

ID: A

7. Solve the equation.

$$21x^2 = -29x + 10$$

8. Solve the equation.

$$x^2 + 5x = 0$$

$$x = \underline{\hspace{2cm}}$$

9. Solve the equation.

$$3x^2 = 6x$$

$$x = \underline{\hspace{2cm}}$$

10. Solve the following equation.

$$3m^2 = 12 - 5m$$

Name: _____

ID: A

11. Solve the equation.

$$18y^3 - 51y^2 - 84y = 0$$

.

12. Solve the equation.

$$100x^2 - 900x + 1,800 = 0$$

$$x = \underline{\hspace{2cm}}$$

.

13. Solve the equation.

$$x(13 - x) = 40$$

$$x = \underline{\hspace{2cm}}$$

Name: _____

ID: A

14. Solve the equation.

$$4,100 = 1,100 + 1100x - 100x^2$$

$$x = \underline{\hspace{2cm}}$$

15. Solve the equation.

$$3,600 = (1,300 - 100p)p$$

$$p = \underline{\hspace{2cm}}$$

16. Use factoring by grouping to solve the equation.

$$x^3 + 5x^2 - 16x - 80 = 0$$

$$x = \underline{\hspace{2cm}}$$

Name: _____

ID: A

17. Factor by grouping first and then solve the equation.

$$9x^3 + 27x^2 - 49x - 147 = 0$$

**MA 90 Exercises for section 6.7 Solving Equations by Factoring
Answer Section****SHORT ANSWER**

1. ANS:
-1, 2

PTS: 1

2. ANS:
0, -3, 2

PTS: 1

3. ANS:
 $0, -\frac{1}{3}, -\frac{5}{7}$

PTS: 1

4. ANS:
 $x = 3, -2$

PTS: 1

5. ANS:
-3, -4

PTS: 1

6. ANS:
1, 4

PTS: 1

7. ANS:
 $x = \frac{2}{7}, -\frac{5}{3}$

PTS: 1

8. ANS:
0, -5

PTS: 1

9. ANS:
0, 2

PTS: 1

10. ANS:

$$m = \frac{4}{3}, -3$$

PTS: 1

11. ANS:

$$0, -\frac{7}{6}, 4$$

PTS: 1

12. ANS:

$$3, 6$$

PTS: 1

13. ANS:

$$5, 8$$

PTS: 1

14. ANS:

$$5, 6$$

PTS: 1

15. ANS:

$$4, 9$$

PTS: 1

16. ANS:

$$-5, -4, 4$$

PTS: 1

17. ANS:

$$\frac{7}{3}, -\frac{7}{3}, -3$$

PTS: 1