

Student: \_\_\_\_\_

Instructor: Ray Brown

Assignment: ch13\_Rev HW

Date: \_\_\_\_\_

Course: Math055 Fall17 CAI 20045

1. Factoring will be done throughout the course. Make sure you understand the concepts. Click the link below to watch a video reviewing concepts in this chapter. You are encouraged to watch the video and work problems with the instructor to help ensure your understanding of the material.

Ch13 Review Video<sup>1</sup>

- True - I understand the concept.  
 False - I am not understanding the concept and intend to seek assistance.

1: <http://www.screencast.com/t/hgbyEYKpQx0>

2. Select the answer that best completes the given statement.

When you are factoring polynomials, a good first step is to factor out the (1) \_\_\_\_\_

- (1)  LCM.  
 GCF.  
 first term.  
 common factor.

3. Factor by grouping.

$$19y^3 + y^2 + 19y + 1$$

$$19y^3 + y^2 + 19y + 1 = \underline{\hspace{2cm}} \text{ (Factor completely.)}$$

4. Factor the expression.

$$12y^3 - 4y^2$$

$$12y^3 - 4y^2 = \underline{\hspace{2cm}}$$

5. Factor the expression.

$$49x^2y^2 - 7xy^3$$

$$49x^2y^2 - 7xy^3 = \underline{\hspace{2cm}}$$

6. Factor the trinomial.

$$x^2 + 14x + 45$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $x^2 + 14x + 45 = \underline{\hspace{2cm}}$   
 B. The trinomial is prime.

7. Factor the trinomial.

$$y^2 + 11y + 28$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $y^2 + 11y + 28 =$  \_\_\_\_\_
- B. The trinomial is prime.

8. Factor the trinomial completely.

$$15y^2 - 39y + 24$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $15y^2 - 39y + 24 =$  \_\_\_\_\_ (Factor completely.)
- B. The polynomial is prime.

9. Factor.

$$7 - 11x - 6x^2$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $7 - 11x - 6x^2 =$  \_\_\_\_\_ (Factor completely.)
- B. The trinomial is not factorable.

10. Factor.

$$-2x^2 + 21x + 11$$

Select the correct choice below and fill in any answer boxes within your choice.

- A.  $-2x^2 + 21x + 11 =$  \_\_\_\_\_
- B. The polynomial is prime.

11. Factor the following binomial completely.

$$x^2 + 100$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $x^2 + 100 =$  \_\_\_\_\_
- B.  $x^2 + 100$  is prime.

12. Factor.

$$4x^2 - 25$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $4x^2 - 25 =$  \_\_\_\_\_
- B. The polynomial is prime.

13. Factor as a perfect square trinomial whenever possible.

$$9y^2 + 12y + 4$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A.  $9y^2 + 12y + 4 =$  \_\_\_\_\_
- B. The polynomial is prime.

14. Select the answer that best completes the given statement.

$$y^3 - 8 = (1) \text{ _____}$$

- (1)   $(y - 2)(y^2 - 2y + 4)$
- $(y + 2)(y^2 - 2y + 4)$
- $(y - 2)(y^2 + 2y + 4)$
- $(y + 2)(y^2 + 2y + 4)$

15. Factor.

$$27x^3 + y^3$$

$27x^3 + y^3 =$  \_\_\_\_\_  
(Simplify your answer. Factor completely.)

16. Solve the equation.

$$(x - 2)(2x + 9) = 0$$

$x =$  \_\_\_\_\_ (Use a comma to separate answers as needed.)

17. Solve the equation.

$$x(x - 3)(x - 4) = 0$$

$x =$  \_\_\_\_\_  
(Use a comma to separate answers as needed.)

18. Solve and check.

$$b^2 - 4 = 0$$

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

(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

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19. Solve and check.

$$16n^2 - 4 = 0$$

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

(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

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20. Solve and check.

$$v^2 + 7v + 10 = 0$$

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

(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

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21. Solve and check.

$$x(x - 3) = 10$$

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

(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

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22. Solve.

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

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What are the solutions of the equation?

$\underline{\hspace{2cm}}$   
(Use a comma to separate answers as needed.)

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23. Solve.

$$4z^3 + 20z^2 = 96z$$

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

(Simplify your answer. Use a comma to separate answers as needed. Type each solution only once.)

1. True - I understand the concept.

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2. (1) GCF.

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3.  $(y^2 + 1)(19y + 1)$

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4.  $4y^2(3y - 1)$

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5.  $7xy^2(7x - y)$

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6. A.  $x^2 + 14x + 45 = \underline{(x + 5)(x + 9)}$

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7. A.  $y^2 + 11y + 28 = \underline{(y + 7)(y + 4)}$

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8. A.  $15y^2 - 39y + 24 = \underline{3(y - 1)(5y - 8)}$  (Factor completely.)

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9. A.  $7 - 11x - 6x^2 = \underline{-(3x + 7)(2x - 1)}$  (Factor completely.)

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10. A.  $-2x^2 + 21x + 11 = \underline{-(x - 11)(2x + 1)}$

---

11. B.  $x^2 + 100$  is prime.

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12. A.  $4x^2 - 25 = \underline{(2x + 5)(2x - 5)}$

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13. A.  $9y^2 + 12y + 4 = \underline{(3y + 2)^2}$

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14. (1)  $(y - 2)(y^2 + 2y + 4)$

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15.  $(3x + y)(9x^2 - 3xy + y^2)$

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16.  $2, -\frac{9}{2}$

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17. 0,3,4

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18.  $2, -2$

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19.  $-\frac{1}{2}, \frac{1}{2}$

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20.  $-5, -2$

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21.  $5, -2$

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22.  $-1, 3, 0$

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23.  $0, 3, -8$

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