Student: yaser almohaws **Date:** 1/1/15 **Time:** 11:18 AM	**Instructor:** fahad aljabr **Course:** MATH-001: Fundamentals of Math 11415 **Book:** Bittinger: Introductory and Intermediate Algebra, 4e	**Assignment:** Week 6 Practice Exercises

1. Solve.

$t^2 - 8t + 15 = 0$

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

A. The solution(s) is/are $t =$ 3,5 .
(Type an integer or a simplified fraction. Use a comma to separate answers as needed. Type each solution only once.)

B. There is no solution.

2. Solve.

$v^2 + 21v = 0$

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

A. $v =$ 0, − 21
(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

B. There is no solution.

3. Solve.

$64a^2 - 25 = 0$

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

A. $a = \frac{5}{8}, -\frac{5}{8}$
(Type an integer or a simplified fraction. Use a comma to separate answers as needed.)

B. There is no solution.

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4. Solve.

$s^2 + 16 = 8s$

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

- A. The solution is $s =$ 4 .
  (Use a comma to separate answers as needed. Type each solution only once.)
- B. There is no solution.

5. Solve.

$20s^2 - 13s = 15$

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

- A. $s =$ $-\frac{3}{5}, \frac{5}{4}$
  (Type an integer or a simplified fraction. Use a comma to separate answers as needed.)
- B. There is no solution.

6. Solve by factoring and using the principle of zero products.

$4w^2 = 64$

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

- A. The solution(s) is/are $w =$ $4, -4$.
  (Type an integer or a simplified fraction. Use a comma to separate answers as needed. Type each solution only once.)
- B. There is no solution.

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7. Solve.

$c^2 - 2c = 24 + 3c$

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

A. The solution(s) is/are $c =$ $8, -3$.
(Type an integer or a simplified fraction. Use a comma to separate answers as needed. Type each solution only once.)

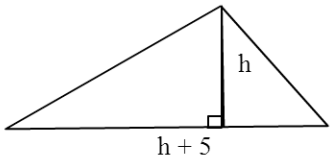
B. There is no solution.

8. A rectangular table is three times as long as it is wide. If the area is 108 ft^2, find the length and the width of the table.

The width of the table is 6 ft.

The length of the table is 18 ft.

9. The base of a triangle is 5 cm greater than the height. The area is 18 cm^2. Find the height and the length of the base.



The height of the triangle is 4 cm.

The base of the triangle is 9 cm.

10. A scientist wants to research the potential spread of germs by contact. She knows that the number of possible handshakes within a group of n people is given by the equation $N = \frac{1}{2}(n^2 - n)$. There are 103 people at a party. How many handshakes are possible?

How many handshakes are possible? 5253

11. The product of two consecutive odd integers is 399. Find the integers.

The positive integers are 21,19.
(Use a comma to separate answers as needed.)

The negative integers are $-21, -19$.
(Use a comma to separate answers as needed.)

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12. A model rocket is launched with an initial velocity of 164 ft/sec. Its height h, in feet, after t seconds is given by the formula $h = 164t - 16t^2$. After how many seconds will the rocket first reach a height of 400 ft?

The rocket first reaches a height of 400 ft after 4 seconds.

13. Simplify by removing factors of 1.

$$\frac{405u^4y^6}{75u^2y^2}$$

The simplified form is $\frac{27}{5}u^2y^4$.

14. Simplify the following expression.

$$\frac{a^2-36}{a^2+8a+12}$$

$$\frac{a^2-36}{a^2+8a+12} = \frac{a-6}{a+2}$$

15. Simplify by removing factors of 1. $\frac{s^2-81}{s^2-18s+81}$

The simplified form is $\frac{s+9}{s-9}$.

16. Simplify by removing factors of 1.

$$\frac{x^2+81}{x+9}$$

The simplified form is $\frac{x^2+81}{x+9}$.

17. Simplify by removing factors of 1.

$$\frac{s+4}{s^2-5s-36}$$

The simplified form is $\frac{1}{s-9}$.

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18. Multiply and simplify.

$$\frac{x^2-49}{x^2}\cdot\frac{x^2-7x}{x^2+x-56}$$

The simplified product is $\frac{(x-7)(x+7)}{x(x+8)}$.

(Simplify your answer.)

19. Multiply and simplify.

$$\frac{s^4-16}{s^4-1}\cdot\frac{s^2+1}{s^2+4}$$

The simplified product is $\frac{(s-2)(s+2)}{(s+1)(s-1)}$.

20. Multiply and simplify.

$$\frac{2b^2-2}{6b^2-54}\cdot\frac{18b+54}{3b-3}$$

$\frac{2b^2-2}{6b^2-54}\cdot\frac{18b+54}{3b-3}=\frac{2(b+1)}{(b-3)}$

(Simplify your answer.)

21. Divide and simplify.

$$\frac{11z-22}{6}\div\frac{z-2}{9}$$

The answer is $\frac{33}{2}$.

(Simplify your answer. Type an integer or a fraction.)

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22. Divide and simplify.

$$\frac{y^2-64}{49y+392} \div \frac{y-8}{56}$$

$$\frac{y^2-64}{49y+392} \div \frac{y-8}{56} = \frac{8}{7}$$

(Type a fraction.)

23. Divide and simplify.

$$\frac{w^2-25}{25w+125} \div \frac{5w^2-50w+125}{125w+625}$$

$$\frac{w^2-25}{25w+125} \div \frac{5w^2-50w+125}{125w+625} = \frac{w+5}{w-5}$$

24. Find the LCM of $c+2$, $(c-2)^2$, and c^2-4.

The LCM is $(c+2)(c-2)(c-2)$.

25. Find the LCM of y^2+6y+9 and y^2+y-6.

The LCM is $(y+3)(y+3)(y-2)$. (Use factored form.)

26. Find the LCM of $3z^6+12z^5-15z^4$ and $5z^8+50z^7+125z^6$.

The LCM is $15z^6(z-1)(z+5)(z+5)$.