Student: _____	**Instructor:** Ray Brown	**Assignment:** final Review HW ch 7_6_1 & 3
Date: _____	**Course:** Sp18 Math050 41165 G81	

1. Identify whether the following is an expression or an equation.

$1613 - x$

Choose the correct answer below.

- Expression
- Equation

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2. Determine whether the terms y^9 and y are like or unlike.

Choose the correct answer below.

- **A.** The terms y^9 and y are like terms.
- **B.** The terms y^9 and y are unlike terms.

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3. Simplify the following expression.

$-(-(7))$

$-(-(7)) =$ _____

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4. Find the absolute value.

$|17|$

$|17| =$ _____

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5. Simplify the following absolute value expression.

$-|-7|$

$-|-7| =$ _____

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6. Evaluate the expression $x + y$ for the given values of the variables.

$x = 39, y = -23$

$x + y =$ _____, for $x = 39$ and $y = -23$

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7. Subtract.

$-10 - (-7)$

$-10 - (-7) =$ _____

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8. Simplify the following expression.

$-21 + (-24) - (-36) + 26$

$-21 + (-24) - (-36) + 26 =$ _____

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9. Multiply the following.

$8(-1)(-2)(-3)$

$8(-1)(-2)(-3) =$ _____

10. Evaluate.

-9^3

$-9^3 =$ _____

11. Evaluate.

-3^2

$-3^2 =$ _____

12. Evaluate.

$(-13)^2$

$(-13)^2 =$ _____

13. Divide, if possible. If the quotient is undefined, state so.

$-18 \div 0$

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

- **A.** $-18 \div 0 =$ _____ (Simplify your answer.)
- **B.** The quotient is undefined.

14. Simplify the expression $-\sqrt{49}$, if possible.

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

- **A.** $-\sqrt{49} =$ _____
- **B.** The expression $-\sqrt{49}$ is not an integer.

15. Evaluate the following expression.

$1 + 5(-2)$

$1 + 5(-2) =$ _____ (Simplify your answer.)

16. Evaluate the following expression.

$54 + (-24) \div 6 - 28$

$54 + (-24) \div 6 - 28 =$ _____ (Simplify your answer.)

17. Evaluate the following expression.

$-8^2 + |11 \cdot (-8)|$

$-8^2 + |11 \cdot (-8)| =$ _____ (Simplify your answer.)

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18. Evaluate the following expression.

$\dfrac{(10-4) \cdot 5}{3^2 - \sqrt{100}}$

$\dfrac{(10-4) \cdot 5}{3^2 - \sqrt{100}} =$ _____ (Simplify your answer.)

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19. Evaluate the expression $2m + \left(3^2 + n\right) \div 3$ for for $m = 6$ and $n = -18$.

For $m = 6$ and $n = -18$, $2m + \left(3^2 + n\right) \div 3 =$ _____.
(Simplify your answer.)

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20. Simplify the following expression.

$14x + 5 - 5x + 9$

$14x + 5 - 5x + 9 =$ _____

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21. Simplify the following sum.

$(x + 4) + (5x + 3)$

$(x + 4) + (5x + 3) =$ _____

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22. Find the opposite of the expression $4x^2 - 8x + 9$.

The opposite of the expression $4x^2 - 8x + 9$ is _____.
(Simplify your answer.)

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23. Simplify the following product.

$-5(7y - 4)$

$-5(7y - 4) =$ _____

---

24. Simplify the following expression.

$4(4a + 2) - 6$

$4(4a + 2) - 6 =$ _____

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25. Translate the following phrase to an algebraic expression. Define the variable.

Two less than his height

Let the variable be h. What is the unknown quantity for which the variable h should be assigned?

- two less than
- his height

Translate the phrase to an algebraic expression.

The expression is _____.
(Type an expression using h as the variable.)

26. Translate the sentence into an equation.

5 times the sum of a number and 8 gives 50.

The equation is _____.
(Do not simplify. Type an equation using x as the variable.)

27. Determine if the value is a solution to the given equation.

$4(z+2)=4z-4,\ 10$

Select the correct choice below and fill in the answer box(es) to complete your choice.

- **A.** The value is a solution. When z is replaced with 10 in the equation, both sides of the equation are equal to _____.
- **B.** The value is not a solution. When z is replaced with 10, the left side of the equation is equal to _____ and the right side of the equation is equal to _____.

28. Use the addition property of equality to solve the following equation. Check your solution.

$7=x-9$

x = _____ (Simplify your answer.)

29. Use the multiplication property of equality to solve the following equation. Check your solution.

$\frac{x}{4}=10$

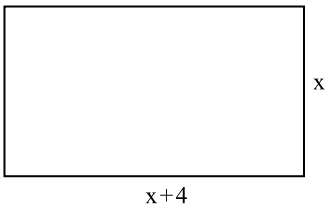
x = _____ (Simplify your answer.)

30. Solve the following linear equation symbolically.

$3(k-5)-2(k+1)-13=-22$

The solution to the equation is _____.
(Type an integer or a simplified fraction.)

31. If the perimeter of the rectangle is 96 inches, find the value of x.



x = _____ (1) _____

(1) ○ inches
○ square inches

32. Write the given ratio as a fraction in simplest form.

$\frac{1}{2}$ to $\frac{5}{6}$

The ratio as a fraction in simplest form is _____.

33. Write the given ratio as a fraction in simplest form.

6.75 : 1.5

The ratio is _____. (Type an integer or a simplified fraction.)

34. Write the given rate as a unit rate.

A vendor makes $24.50 selling 14 drinks.

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

○ **A.** A vendor makes _____ drinks/dollar.
○ **B.** A vendor makes $_____/drink.

35. Find the unit price.

A 2-pound bag of pistachios for $7.50.

The unit price is $_____/lb. (Simplify your answer. Type an integer or a decimal.)

36. A public university has a student-to-instructor ratio of 865 to 20, while the local community college has a student-to-instructor ratio of 355 to 10. Find the unit ratio at each school. Interpret the results for the community college.

The unit ratio at the public university is _____.
(Simplify your answer. Type an integer or a decimal.)

The unit ratio at the community college is _____.
(Simplify your answer. Type an integer or a decimal.)

Interpret the results for the community college. Choose the correct answer below.

- **A.** There are 355 students for every 10 instructors.
- **B.** There are 35.5 students for each instructor.
- **C.** There are 10 instructors for every 355 students.
- **D.** There are 35.5 instructors for each student.

37. Determine if the given equation is a proportion.

$$\frac{\frac{1}{7}}{14} \stackrel{?}{=} \frac{\frac{2}{7}}{42}$$

Select the correct choice below and fill in the answer boxes to complete your choice.
(Simplify your answers.)

- **A.** Since the cross products $\frac{1}{7} \cdot 42 =$ _____ and $\frac{2}{7} \cdot 14 =$ _____, the equation is a proportion.
- **B.** Since the cross products $\frac{1}{7} \cdot 42 =$ _____ and $\frac{2}{7} \cdot 14 =$ _____, the equation is not a proportion.

38. Solve the proportion.

$$\frac{-3.6}{-2.4} = \frac{x}{4.8}$$

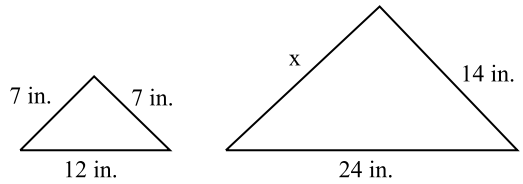
x = _____ (Simplify your answer. Type an integer or a decimal.)

39. Solve the given proportion.

$$\frac{1\frac{1}{13}}{-6\frac{2}{3}} = \frac{a}{4\frac{1}{6}}$$

a = _____
(Type an integer or a simplified fraction.)

40. Find the measure of x for the similar figures shown to the right.



x = _____ (1) _____
(Simplify your answer.)

(1) ○ inches
○ square inches
○ cubic inches

41. A survey determine that 112 of 672 students walk to school each day. If this ratio holds in a math class with 24 students, how many of the math students walk to school?

_____ of the math students walk to school.
(Simplify your answer.)

42. Convert the length as indicated.

313 kilometers to hectometers

313 kilometers = _____ hectometers
(Type an integer or a decimal.)

43. Convert the length as indicated.
0.41 meters to decimeters

0.41 m = _____ dm
(Type an integer or a decimal.)

44. Convert the mass as indicated.

0.007 kilogram to centigrams

0.007 kg = _____ cg
(Type an integer or a decimal.)

45. Convert as indicated.

7 in to cm

7 in ≈ _____ cm (Round to the nearest hundredth.)

46. Convert the length as indicated.

32 miles to kilometers

32 mi = _____ km
(Simplify your answer. Type a whole number or decimal rounded to the nearest hundredth as needed.)

47. Convert the capacity or volume as indicated.

405 grams to ounces

405 g ≈ _____ oz (Round to two decimal places as needed.)

48. Convert the temperature symbolically. Give an exact answer in decimal form.

2°C to Fahrenheit

2°C = _____ $^{\circ}$F
(Type an integer or a decimal.)

49. Write the following percent as a fraction or mixed number in simplest form.

12.5%

12.5% = _____

50. Write the percent as a decimal.

73%

73% = _____ (Simplify your answer. Type an integer or a decimal.)

51. Write the following fraction as a percent.

$\frac{13}{20}$

$\frac{13}{20}$ = _____ % (Type an integer or a simplified fraction.)

52. Find the unknown value below.

What number is 8% of 62.5?

_____ is 8% of 62.5.
(Simplify your answer. Type an integer or a decimal.)

53. Find the unknown value below.

58 is 4% of what number?

58 is 4% of _____.
(Simplify your answer. Type an integer or a decimal.)

54. A worker has 22% of her weekly pay withheld for taxes, insurance, and a pension plan. If her weekly gross pay is $780, find her total withholdings and net pay.

The total withholdings are $_____.
(Type an integer or a decimal.)

The net pay is $_____.
(Type an integer or a decimal.)

55. A worker has $756 withheld from her pay every two weeks. If this represents 21% of her gross pay, what is her gross pay?

The gross pay is $_____.
(Type an integer or a decimal.)

56. A company reduces its global workforce from 16400 employees to 14432 employees. Find the percent decrease.

The workforce decreases by _____ %.
(Type an integer or a decimal.)

1. Expression

2. B. The terms y^9 and y are unlike terms.

3. 7

4. 17

5. -7

6. 16

7. -3

8. 17

9. -48

10. -729

11. -9

12. 169

13. B. The quotient is undefined.

14. A. $-\sqrt{49} =$ **-7**

15. -9

16. 22

17. 24

18. -30

19. 9

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20. $9x + 14$

---

21. $6x + 7$

---

22. $-4x^2 + 8x - 9$

---

23. $-35y + 20$

---

24. $16a + 2$

---

25. his height

$h - 2$

---

26. $5(x + 8) = 50$

---

27. B.

The value is not a solution. When z is replaced with 10, the left side of the equation is equal to **48** and the right side of the equation is equal to **36**.

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28. 16

---

29. 40

---

30. 8

---

31. 22

(1) inches

---

32. $\frac{3}{5}$

---

33. $\frac{9}{2}$

---

34. B. A vendor makes $ **1.75** /drink.

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35. 3.75

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36. 43.25

    35.5

    B. There are 35.5 students for each instructor.

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37. B. Since the cross products $\frac{1}{7} \cdot 42 =$ **6** and $\frac{2}{7} \cdot 14 =$ **4**, the equation is not a proportion.

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38. 7.2

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39. $-\frac{35}{52}$

---

40. 14

    (1) inches

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41. 4

---

42. 3,130

---

43. 4.1

---

44. 700

---

45. 17.78

---

46. 51.61

---

47. 14.29

---

48. 35.6

---

49. $\frac{1}{8}$

---

50. 0.73

---

51. 65

52. 5

53. 1450

54. 171.60
608.40

55. 3600

56. 12