

OAKLAND CUSD #5

HS ALGEBRA

APRIL 20-24, 2020

NICHOLE EPPERSON

Week of April 20-24, 2020

HS Algebra

Mrs. Epperson

How are you doing? I am REALLY missing you ALL! If you are able, please connect with us through our google classroom. We have weekly calls on Thursdays if you are able to join us. They are NOT required, but it's nice to catch up and see your faces. The time we meet on Thursdays is from 2:15-2:45, you can find the link to connect with us in your student email (same email and password you use to log into chromebooks; remember, the ending of your email address is @oakland5.org)

You may use your math folder to help you. You have to complete 2 worksheets, but may complete all 5.
I am available at nichole.epperson@oakland5.org or 708-517-0534 for any questions. You may call or text.

All worksheets have the appropriate grade level/subject at the top.

Class	Choice 1	Choice 2	Choice 3	Choice 4	Choice 5
HS Algebra	1-10	2-1	2-2	2-3	8-4



1-10 Additional Practice

Week of 4/20-4/24

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Leveled Practice In 1 and 2, complete the expressions to find the answer.

1. Simplify the expression $(9.6 \times 10^{-8}) + (2 \times 10^{-15})$. Express your answer in scientific notation.

$$\left(\quad + \quad \right) \times \left(10 \quad \div 10 \quad \right)$$

$$\quad \times 10 \quad$$

2. Simplify the expression $(6.8 \times 10^6) + (3.4 \times 10^6)$. Express your answer in scientific notation.

$$\left(\quad + \quad \right) \times 10$$

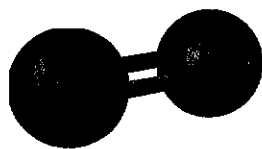
$$\quad \times 10$$

$$\quad \times 10$$

3. What is the value of n in the equation $2.6 \times 10^{-2} = (5.2 \times 10^7) \div (2 \times 10^n)$?

4. Simplify $(14.1 \times 10^5) - (2.9 \times 10^5)$. Write your answer in scientific notation.

5. What is the mass of 75,000 oxygen molecules? Express your answer in scientific notation.



Mass of one molecule of
oxygen = 5.3×10^{-23} gram

6. **Critique Reasoning** Your friend says that the quotient of 9.2×10^8 and 4×10^{-3} is 2.4×10^5 . Is this answer correct? Explain.

7. Find $(3.8 \times 10^7) \times 162$. Write your answer in scientific notation.

8. Find $\frac{10.5 \times 10^{-5}}{2.5 \times 10^{-2}}$. Write your answer in scientific notation.

Algebra- Epperson, 4/20-4/24

9. Find $\frac{6.5 \times 10^{11}}{1.3 \times 10^8}$. Write your answer in scientific notation.
10. Find $(7.6 \times 10^3) \times (5.9 \times 10^{12})$. Write your answer in scientific notation.
11. The average U.S. resident uses 100 gallons of water per day. The population of the United States is about 3.23×10^8 . About how many gallons of water do U.S. residents use each day? Express your answer in scientific notation.
12. Higher Order Thinking
- a. What is the value of n in the equation $1.8 \times 10^n = (6 \times 10^8)(3 \times 10^6)$
- b. Explain why the exponent on the left side of the equation is not equal to the sum of the exponents on the right side.



Assessment Practice

13. Find $(4.54 \times 10^8) - (3.98 \times 10^8)$. When you regroup the decimals, what do you notice about their difference? How does this affect the exponent of the difference?
14. Which expression has the greatest value?
- Ⓐ $(3.23 \times 10^4) + (5.6 \times 10^{-3})$
- Ⓑ $(3.23 \times 10^4) - (5.6 \times 10^{-3})$
- Ⓒ $(3.23 \times 10^4) \times (5.6 \times 10^{-3})$
- Ⓓ $(3.23 \times 10^4) \div (5.6 \times 10^{-3})$



PRACTICE



TUTORIAL

Name: _____

2-1 Additional Practice

Scan for
Multimedia**Leveled Practice** In 1 and 2, complete the steps to solve for x .

1. $\frac{4}{7}x + \frac{5}{14}x = 39$

$$\frac{\quad}{14}x = 39$$

$$\frac{\quad}{\quad} \left(\frac{\quad}{14}x \right) = \frac{\quad}{\quad} (39)$$

$$x =$$

2. $-12.6x - 4.9x = -154$

$$x = -154$$

$$x = \frac{-154}{\quad}$$

$$x =$$

In 3–6, solve for x .

3. $2.4x - 9.1x + 12.5x = -39.44$

4. $-\frac{5}{6}x - \frac{1}{9}x = -102$

5. $\frac{5}{11}x + \frac{2}{3}x - \frac{1}{6}x = -189$

6. $8.7x - 1.9x = 116.96$

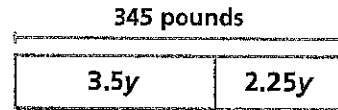
7. **Make Sense and Persevere** Wayne bought blueberries. He uses $\frac{3}{8}$ of the blueberries to make blueberry bread, $\frac{1}{6}$ of the blueberries to make pancakes, and $\frac{5}{12}$ of the blueberries to make jam. If Wayne uses 69 ounces of the blueberries he bought, how many ounces of blueberries did he buy?

8. **Make Sense and Persevere** Charlotte buys a ticket to go to a baseball game. The total includes a charge of 7% of the original price for extra fees. If Charlotte pays a total of \$44.94, how much was the original price of the ticket?

9. Manuel bought 9 pounds of apples. He has eaten $\frac{3}{4}$ of a pound so far and has \$15 worth of apples left. Write and solve an equation to find the cost of the apples per pound to the nearest dollar. How much did the apples cost per pound?

10. Higher Order Thinking Solve $\frac{3}{4}h - 12 = 8\frac{5}{8}$.

11. Timothy bought concrete mix for several projects. He used 3.5 bags of concrete mix for a new set of stairs and 2.25 bags of concrete mix for a garden wall. Timothy mixed 345 pounds of concrete in all.



a. **Model with Math** Write an equation that can be represented by the bar diagram.

b. Solve for y . How many pounds of concrete does each bag make?

12. The community center has a pottery class each month. Each student pays \$15 for the class and \$27 for materials. This month the pottery class brought in a total of \$714. How many students are in the class this month?

✓ Assessment Practice

13. **Construct Arguments** Your friend incorrectly says the solution to the equation $11.2y - 7.4y = 141.36$ is $y = 7.6$. What error did your friend make?

- Ⓐ Divided incorrectly
- Ⓑ Added $7.4y + 11.2y$
- Ⓒ Solved for $\frac{1}{y}$ instead of y
- Ⓓ Subtracted like terms incorrectly

14. Brian scored $\frac{1}{10}$ of the points for his basketball team in the state championship game. Joe scored $\frac{1}{4}$ of the points. Together they scored 21 points. Write an equation to represent the situation. What was the total number of points the team scored?

Name: _____



PRACTICE



TUTORIAL

2-2 Additional Practice

Week of 4/20-4/24

Leveled Practice In 1 and 2, solve each equation.

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1. $6.4n - 10 = 4.4n + 6$

$$n - 10 =$$

$$n =$$

$$n =$$

2. $\frac{1}{3}k + 80 = \frac{1}{2}k + 120$

$$\frac{\quad}{6}k + 80 = \frac{\quad}{6}k + 120$$

$$= \frac{\quad}{6}k + 120$$

$$= \frac{\quad}{6}k$$

$$= k$$

3. You and a friend are doing math homework together. You have to solve the equation $5x + 4x - 68 = 34 - 8x$. Your friend arrives at the answer $x = -2$. Is she correct? Explain.

In 4 and 5, solve the equation for x .

4. $\frac{5}{8}x + 4 = \frac{3}{8}x + 12$

5. $150 - x - 2x = 120 + 2x$

6. A rental car agency charges \$240 per week plus \$0.25 per mile to rent a car. The charge for a minivan is \$180 per week plus \$0.40 per mile. After how many miles is the total charge for each vehicle the same?

7. The Smith family and the Jackson family are having their basements remodeled. The Smith's contractor charges \$16.50 per hour plus \$289 in supplies. The Jackson's contractor charges \$18.75 per hour and \$274.60 in supplies. At how many hours of work will the total cost be the same for both families?

Algebra- Epperson, week of 4/20-4/24

8. Jim currently has \$1,250 in his bank account and Sally has \$1,400 in her bank account. Jim deposits \$27.50 per week and Sally deposits \$20 per week into her account. After how many weeks will they have the same amount of money?
9. **Higher Order Thinking** The price of Stock A at 9 A.M. was \$15.75. Since then, the price has been increasing at the rate of \$0.05 per hour. At noon, the price of Stock B was \$16.53. It begins to decrease at the rate of \$0.13 per hour. If the stocks continue to increase and decrease at the same rates, in how many hours will the prices of the stocks be the same?

 **Assessment Practice**

10. Solve the equation $\frac{7}{3}x + \frac{1}{3}x = 1 + \frac{5}{3}x$. Show your work.

11. Schools A and B are competing in an academic contest. At the beginning of the final round, School A has 174 points and School B has 102 points. In the final round, correct answers earn 10 points and incorrect answers lose 6 points. School A gives the same number of correct and incorrect answers during the final round. School B gives no incorrect answers and the same number of correct answers as School A. The contest ends with the two schools tied.

PART A

Which equation models the scoring in the final round and the outcome of the contest?

- Ⓐ $174 + 10x = 102 + 10x - 6x$
- Ⓑ $174 + 10x - 6x = 102 + 4x$
- Ⓒ $174 - 6x = 102 + 10x$
- Ⓓ $174 + 10x - 6x = 102 + 10x$

PART B

How many correct answers does each school give during the final round?

2-3 Additional Practice

Week of 4/20-4/24

Leveled Practice In 1-3, find the value of x .

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1. Donavon and three friends go to a fair.
They each spend $\frac{1}{2}$ of their money on rides.
Then they each spend \$3 on food. At the
end of the day, Donavon and his friends
have a total of \$8 remaining. How much
money did each person bring to the fair?

$$4(x - \quad) =$$

$$x - \quad =$$

$$x =$$

$$x =$$

Donavon and his friends each brought a total of \$ _____.

2. Use the Distributive Property to solve the
equation $25 - (3x + 5) = 2(x + 8) + x$.

$$25 - \quad x - \quad = 2x + \quad + x$$

$$20 - \quad x = \quad x +$$

$$20 - \quad x =$$

$$x =$$

$$x =$$

3. Use the Distributive Property to solve the
equation $2(x - 3) + 3 = 6x - 5$.

$$x - \quad + 3 = 6x -$$

$$x - \quad = 6x -$$

$$x - \quad =$$

$$x =$$

$$x =$$

4. Solve the equation $\frac{1}{5}(x - 2) = \frac{1}{10}(x + 6)$.

5. Solve the equation $0.35(x + 4) = 0.25(x - 6)$.

6. If you take $-\frac{3}{10}$ of a number and add 1, you get 10. Let x represent
the original number.

a. Write an equation that represents the situation.

b. What is the original number?

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7. Solve the equation $-9(x + 6) = -207$.

8. Use the Distributive Property to solve the equation $5x - 3(x - 3) = -6 + 6x - 5$.

9. **Higher Order Thinking** The length of a postage stamp is $4\frac{1}{4}$ millimeters longer than its width. The perimeter of the stamp is $124\frac{1}{2}$ millimeters.

a. Write the equation that represents the situation.

b. What is the width of the postage stamp?

c. What is the length of the postage stamp?

Assessment Practice

10. You are given the equation $2(\frac{1}{2}t + 3) = 1$ to solve as part of a homework assignment.

PART A

Describe the first step needed to solve the equation.

PART B

Solve the equation for t . Show your work.

11. Solve the equation $2(6 - x) = 3(x - 1)$.

Name: _____



PRACTICE



TUTORIAL

8-4 Additional Practice

Week of 4/20-4/24

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- 1. Leveled Practice** A solid plastic sphere has a radius of 8 inches. How much plastic does it take to make one sphere? Use 3.14 for π , and round to the nearest whole number.

Use the formula $V = \frac{4}{3}\pi r^3$.

$$V = \frac{4}{3}\pi(\quad)^3$$

$$V = \frac{4}{3}\pi(\quad)$$

$$V \approx \frac{4}{3}(\quad)(\quad)$$

$$V \approx (\quad)$$

It takes approximately _____ cubic inches of plastic to make one sphere.

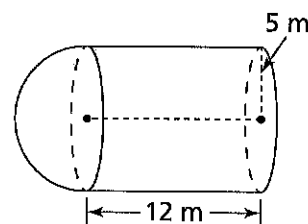
- 2.** A sphere has a diameter of 0.926 inch.

- a.** What is the volume of the sphere?

Use 3.14 for π , and round to the nearest thousandth.

- b. Reasoning** How does the volume of this sphere compare to the volume of a sphere with radius 0.926 inch?

- 3.** Find the volume of the figure. Use 3.14 for π , and round to the nearest whole number.



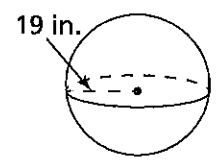
- 4.** A spherical container has surface area of about 5,538.96 square centimeters.

- a.** What is the volume of the container? Use 3.14 for π , and round to the nearest hundredth.

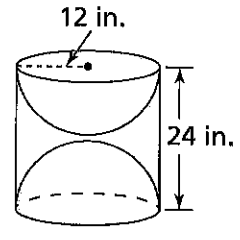
- b. Make Sense and Persevere** If 600 cubic centimeters of water flow into the container in one minute, about how many minutes will it take to fill the container?

Algebra- Epperson, week of 4/20-4/24

5. A sphere has a radius of 19 inches.
- What is the volume of the sphere? Use 3.14 for π , and round to the nearest hundredth.
 - Describe how the volume of the sphere changes if the radius is increased by 1.



6. **Higher Order Thinking** Find the volume of the solid where the two hemispheres are hollow. Explain. Use 3.14 for π , and round to the nearest hundredth.



Assessment Practice

7. The surface area of a globe in Mr. Patton's classroom is about 452.39 square inches. Find its volume in cubic inches. Use 3.14 for π . Round to the nearest whole number.

8. A septic tank has the shape shown. How many gallons of fluid does it hold? Use 3.14 for π , and round to the nearest gallon. Note: $1 \text{ ft}^3 \approx 7.48 \text{ gal}$.

