Week of April 6-10, 2020
Algebra
Mrs. Epperson

You may use your math folder to help you. You have to complete 1 worksheet, but may complete all 3.
I am available at nichole.epperson@oakland5.org or 708-517-0534 for any questions. You may call or text.

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

April 6th Choice 1 Epperson - Math

H.S. Algebra

Name:

PRACTICE TUTORIAL

1-1 Additional Practice

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Week of 4/6-4/10

Leveled Practice **In 1–4, write the decimal as a fraction or mixed number.**

1. Write $0.\overline{2}$ as a fraction.

Let $x =$.

$10x =$

$10x - x =$ $-$

$9x =$

$x =$

So $0.\overline{2}$ is equal to .

2. Write 1.888... as a mixed number.

Let $x =$.

$10x =$

$10x - x =$ $-$

$9x =$

$x =$

So 1.888... is equal to .

3. Write $0.4\overline{6}$ as a fraction.

Let $x =$.

$10x =$

$100x =$

$100x - 10x =$ $-$

$90x =$

$x =$

So $0.4\overline{6}$ is equal to .

4. Write $0.\overline{12}$ as a fraction.

Let $x =$.

$100x =$

$100x - x =$ $-$

$99x =$

$x =$

So $0.\overline{12}$ is equal to .

5. Look for Relationships Brianna asked 45 students if they would vote for her to be student council president. She used her calculator to compare the number of students who said yes with the total number of students. Her calculator showed the result as 0.6222....

a. Write this number as a fraction.

b. How many students said they would vote for Brianna?

H.S. Algebra Choice 1 Epperson - Math April 6-10th

6. Write $3.0\overline{1}$ as a mixed number.

7. Write $0.\overline{7}$ as a fraction.

8. **Higher Order Thinking** A reporter determines a baseball player's batting average, which is a ratio of number of hits to number of times at bats. The result is shown on a calculator as 0.2121....

a. Write this repeating decimal as a fraction.

b. How many hits would the player be expected to get in 200 at bats? Explain.

9. Write $0.\overline{32}$ as a fraction.

10. Write $2.\overline{5}$ as a mixed number.

Assessment Practice

11. Choose the repeating decimal that is equal to the fraction on the left.

	$0.\overline{24}$	$0.\overline{36}$	$0.2\overline{4}$	$0.3\overline{6}$
$\frac{33}{90}$	☐	☐	☐	☐
$\frac{24}{99}$	☐	☐	☐	☐
$\frac{36}{99}$	☐	☐	☐	☐
$\frac{22}{90}$	☐	☐	☐	☐

12. What fraction is equivalent to $0.\overline{6}$?

April 6-10th Choice 2 Epperson - Math

H.S. Algebra

Name:

PRACTICE TUTORIAL

1-2 Additional Practice

Week of 4/6-4/10

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1. Is 8.141141114... a rational or irrational number? Explain.

2. Is $\sqrt{72}$ rational or irrational? Explain.

3. Which numbers are rational?

$\sqrt{81}$, $\sqrt{50}$, -12, 0, $\frac{12}{5}$, $6.\overline{54}$

4. Which numbers are irrational?

11, $\sqrt{15}$, -14, $\frac{5}{7}$, $\frac{9}{4}$, $0.151155111555...$

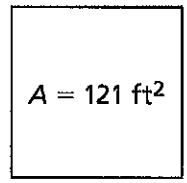
5. Richie says that 2.141441444... is a rational number. Elsa disagrees.

a. Who is correct?

b. What is the likely cause of the error?

H.S. Algebra Choice 2 Epperson - Math April 6-10th

6. Reasoning Write the side length of the square as a square root. Is the side length a rational number? Explain.



7. Keisha writes the following list of numbers.

$-9, \sqrt{8}, 3.0, \frac{2}{5}, 2.4\overline{2}, \pi$

a. Which numbers are rational?

b. Which numbers are irrational?

8. Higher Order Thinking You are given the expressions $\sqrt{60+n}$ and $\sqrt{2n+28}$. What is tthe smallest value of n that will make each number rational?

Assessment Practice

9. Which numbers are rational?

I. 3.222222...

II. 0.112123123412345...

III. 1.589

Ⓐ I only

Ⓑ II only

Ⓒ III only

Ⓓ I and III

Ⓔ II and III

Ⓕ None of the above

10. Classify the following numbers as rational or irrational.

$\frac{2}{3}$ 3.1415926535... 0 $\sqrt{1}$ $7.\overline{4}$ 15 $\sqrt{3}$

Rational	Irrational

April 6-10th Choice 3 Epperson - Math

H.S. Algebra

Name:

PRACTICE TUTORIAL

1-3 Additional Practice

Week of 4/6-4/10

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Leveled Practice **In 1 and 2, find the rational approximation.**

1. Approximate using perfect squares.

$\quad < 78 <$

$< \sqrt{78} <$

$< \sqrt{78} <$

So $\sqrt{78}$ is between and .

2. Find the rational approximation of $\sqrt{37}$.

a. Approximate using perfect squares.

$\quad < 37 <$

$< \sqrt{37} <$

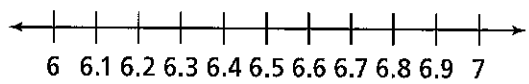
$< \sqrt{37} <$

b. **Model with Math** Locate and plot $\sqrt{37}$ on a number line. Find a better approximation using decimals.

$6.0 \times 6.0 =$

$6.1 \times 6.1 =$

$\sqrt{37}$ is closer to .



3. **Reasoning** Compare $-\sqrt{7}$ and $-3.12345\ldots$. Justify your reasoning.

4. Does $\frac{22}{7}$, -3, $\sqrt{17}$, $\frac{16}{5}$, or -4.5 come first when the numbers are listed from least to greatest? Explain.

5. List the numbers in order from least to greatest.

$\sqrt{5}$, 3.7, $\frac{1}{2}$, -4, $-\frac{9}{4}$

H.S. Algebra Choice 3 Epperson - Math April 1 6-10th

6. Compare 6.51326... and $\sqrt{39}$. Show your work.

7. Ross is comparing $\sqrt{11}$ and $5.\overline{4}$. He says that $\sqrt{11} > 5.\overline{4}$ because $\sqrt{11} = 5.5$.

   a. What is the correct comparison?

   b. **Critique Reasoning** What mistake did Ross likely make?

8. **Higher Order Thinking** If $x = 5$, $y = 6$, and $z = 2$, is $\sqrt{x^2 + y^2 + z^2 + 50}$ rational or irrational? Explain.

Assessment Practice

9. Which list shows the numbers in order from least to greatest?

   Ⓐ $\sqrt{32}$, 5.2, $4\frac{2}{3}$, $\sqrt{17}$

   Ⓑ $\sqrt{17}$, $4\frac{2}{3}$, 5.2, $\sqrt{32}$

   Ⓒ $4\frac{2}{3}$, $\sqrt{32}$, $\sqrt{17}$, 5.2

   Ⓓ 5.2, $\sqrt{17}$, $\sqrt{32}$, $4\frac{2}{3}$

10. The area of a square picture frame is 55 square inches. Find the length of one side of the frame. Explain.

    PART A

    To the nearest whole inch

    PART B

    To the nearest tenth of an inch

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H.S. Algebra

Name:

Choice 4

April 6-10th

PRACTICE TUTORIAL

8-1 Additional Practice

Week of 4/6-4/10

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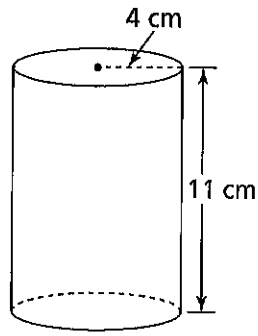
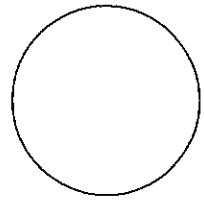
1. What is the surface area of the cylinder? Use 3.14 for π, and round to the nearest tenth.



2. What is the surface area of the ball shown? Use $\frac{22}{7}$ for π, and round to the nearest whole number.

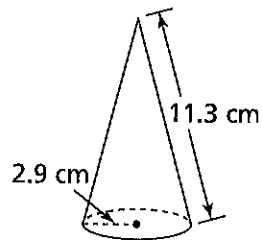


Radius is 9 centimeters.

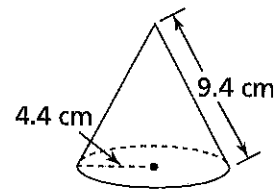
3. The length of the radius and slant height of two different cones are shown.

a. Find the surface area of each cone. Use 3.14 for π, and round to the nearest hundredth.

b. Which cone has the greater surface area?



Cone I



Cone II

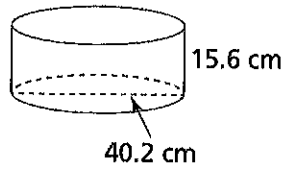
4. A sphere has a surface area of 9,244 square feet.

a. What is the radius of the sphere? Use 3.14 for π, and round to the nearest hundredth.

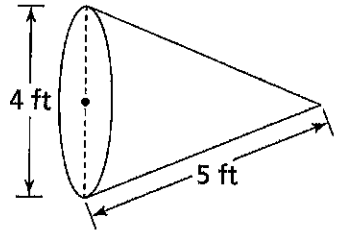
b. **Make Sense and Persevere** How can you check your answer?

H.S Algebra Epperson Choice 4 April 6-10th

5. Sergio works at a bakery and needs to cover eight identical cylindrical cakes with frosting. The bottom of each cake does not need frosting. What surface area of each cake needs to be frosted? Use 3.14 for π, and round to the nearest hundredth.



6. What is the surface area of the cone? Use 3.14 for π, and round to the nearest whole number.



7. **Higher Order Thinking** A cylindrical vase has height 17 inches and radius 3 inches.

   a. Find the exact surface area of the vase in terms of π.

   b. Suppose a second vase has double the radius, but the same surface area. What is the height of the vase?

Assessment Practice

8. A welder is making a metal sphere. The radius will be 115 centimeters. What is the surface area of the metal sphere? Use 3.14 for π.

   Ⓐ About 166,106 cm^2

   Ⓑ About 52,900 cm^2

   Ⓒ About 664,424 cm^2

   Ⓓ About 41,526.5 cm^2

9. Thirty percent of the metal sphere from Exercise 8 will be covered in a metal that is tinted red. What is the area, to the nearest square centimeter, of the tinted section of the sphere?

Epperson
HS Algebra Name:

Choice 5

April 6-10th

PRACTICE TUTORIAL

8-2 Additional Practice

Week of 4/6-4/10

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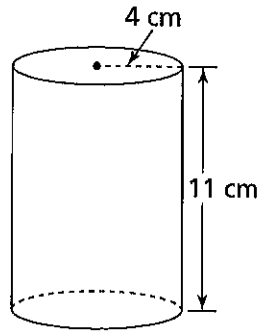
1. Leveled Practice What is the volume of the cylinder? Use 3.14 for π.



$V = \pi \cdot$ $^2 \cdot$

$= \pi \cdot$ $\cdot$

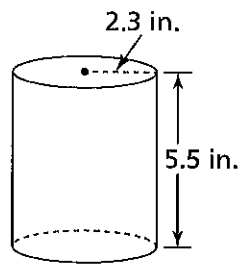
$=$ π

The volume of the cylinder is about cubic centimeters.

2. The volume of the cylinder is 48π cubic feet. The area of the base is 12π square feet. What is the height of the cylinder?

3. You are building a sand castle and want to use a cylindrical bucket that holds 885 cubic inches of sand. If the bucket has a height of 11.7 inches, what is the radius of the bucket? Use 3.14 for π, and round to the nearest tenth.

4. A cylinder has radius 2.3 inches and height 5.5 inches.



a. Find the volume of the cylinder. Use 3.14 for π, and round to the nearest tenth.

b. Reasoning If the radius of the cylinder is changed, but the height remains the same, how will the volume change?

H.S. Algebra Epperson Choice 5 April 6-10th

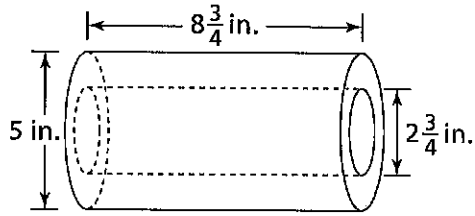
5. **Critique Reasoning** Claire says that she can find the volume of any cylinder as long as she can measure the circumference and height. Is Claire correct? Explain.

6. Find the volume of each cylinder in terms of π. Which cylinder has the greatest volume?

Cylinder A: diameter = 7 in., height = 12 in.

Cylinder B: diameter = 12 in., height = 7 in.

7. **Higher Order Thinking** The cylinder shown is a steel tube that weighs 0.2835 pound per cubic inch. The inner part of the tube is hollow. What is the weight of the tube? Use 3.14 for π, and round to the nearest tenth.



Assessment Practice

8. The diameter of a cylinder is $(6x - 8)$ in. and the height of the cylinder is $(11x + 10)$ in. Find the volume, in cubic inches and in terms of π, of the cylinder when $x = 7$.

9. The volume of a cylinder is $4{,}000\pi$ in.^{3}. The height of the cylinder is 250 in. What is the radius, in inches, of the cylinder?