



Teacher's Resource Masters

GRADE 8 VOLUME 1

Topics 1–4

Home-School Connection Letters

Pick a Project

enVision® STEM Project

Reteach to Build Understanding

Additional Vocabulary Support

Build Mathematical Literacy

Enrichment

enVision® Mathematics

Grade 8

Volume 1: Topics 1–4

Topic 1 Real Numbers

Topic 1 Home-School Connection (English and Spanish)

Topic 1 Pick a Project A–D

Topic 1 **enVision**® STEM Project

Reteach to Build Understanding 1-1 through 1-10

Additional Vocabulary Support 1-1 through 1-10

Build Mathematical Literacy 1-1 through 1-10

Enrichment 1-1 through 1-10

Topic 2 Analyze and Solve Linear Equations

Topic 2 Home-School Connection (English and Spanish)

Topic 2 Pick a Project A–D

Topic 2 **enVision**® STEM Project

Reteach to Build Understanding 2-1 through 2-9

Additional Vocabulary Support 2-1 through 2-9

Build Mathematical Literacy 2-1 through 2-9

Enrichment 2-1 through 2-9

Topic 3 Use Functions to Model Relationships

Topic 3 Home-School Connection (English and Spanish)

Topic 3 Pick a Project A–D

Topic 3 **enVision**® STEM Project

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Topic 4 Investigate Bivariate Data

Topic 4 Home-School Connection (English and Spanish)

Topic 4 Pick a Project A–D

Topic 4 **enVision**® STEM Project

Reteach to Build Understanding 4-1 through 4-5

Additional Vocabulary Support 4-1 through 4-5

Build Mathematical Literacy 4-1 through 4-5

Enrichment 4-1 through 4-5

How can you write $0.\overline{72}$ as a fraction?

Let $x = 0.\overline{72}$.

Set the decimal number equal to x .

$$100x = 72.\overline{72}$$

Multiply each side by a power of 10 to get repeating numbers to the left of the decimal point.

$$100x - x = 72.\overline{72} - 0.\overline{72}$$

Subtract the equations to eliminate the repeating decimals.

$$99x = 72$$

$$\frac{99x}{99} = \frac{72}{99}$$

Solve for x .

$$x = \frac{8}{11}$$

In yesterday's basketball game, Raul made $77.\overline{7}\%$ of his shots. What fraction of his shots did he make?

1. How would you write $77.\overline{7}\%$ as a decimal? Set that decimal equal to x . What digit or digits repeat?
2. Multiply each side of the equation by a power of 10 to get the repeating digit(s) to the left of the decimal point. Since you only need to move one place, multiply each side by 10.
3. Subtract the equation in Exercise 1 from the equation in Exercise 2. Then simplify.
4. Divide each side of the equation by 9 to solve for x . What fraction is equal to x ? Show your work.
5. What fraction of Raul's shots did he make?

On the Back!

6. This season, Jenny's lacrosse team had a winning percentage of $0.8\overline{3}$. What fraction of their games did Jenny's team win?

Name _____

Choose the term from the list that *best* represents the item in each box.

equivalent
power of 10

fraction
repeating decimal

mixed number
repeating digits

nonrepeating digit
terminating decimal

1. $4\frac{3}{11}$

2. $0.\overline{6}$

3. $0.\overline{45} \cdot 100 = 45.\overline{45}$



4. $2.8333\ldots$



5. $2.181818\ldots$



6. $0.555\ldots = \frac{5}{9}$



7. $\frac{5}{6}$

8. 0.625

Name _____

Read the problem below. Then answer the questions to help you understand the problem.

As part of her science project, Malia plans to compare the weights of several different objects on Earth to their weights on Mars.

Object	Weight on Earth	Weight on Mars
Camera	27 oz	
Laptop	40 oz	
USB microscope	15 oz	

To find the weights on Mars, she must multiply each weight on Earth by the decimal 0.376666... . What fraction could Malia use to make the same calculation?

1. Underline the question that you need to answer.
2. Circle the number that you need to convert to a fraction.
3. How can you rewrite the repeating decimal using bar notation? Explain.

4. Circle the equation you could use to write the repeating decimal as a fraction.

$$x = 0.37\overline{6}$$

$$x = 3.7\overline{6}$$

$$x = 37.\overline{6}$$

$$x = 37.\overline{6}$$

5. After you set up the equation, what is the next step in converting the repeating decimal to a fraction?
6. How can you check that your answer is correct?