



# Fourth Grade Math

This packet includes four sections that cover some of the major content of 4<sup>th</sup> Grade Math. Each section includes notes and practice for each topic. For additional support, visit KCS TV on YouTube for instructional videos that accompany each section.

The following content is included in this packet:

	Topic			
	I. Classify Two-Dimensional Figures	II. Multiply and Divide Whole Numbers	III. Equivalent Fractions and Comparing Fractions	IV. Relate Decimals and Fractions and Compare Decimals
Activity 1	Compare Quadrilaterals	Multiplying Whole Numbers	Equivalent Fractions	Fractions and Decimals
Activity 2	Sorting Shapes based on parallel and perpendicular sides	Dividing Whole Numbers	Compare Fractions-Common Denominators	Compare Fractions
Activity 3	Sorting Shapes based on angles		Compare Fractions-Using a Benchmark	Compare Tenths and Hundredths
Activity 4	Sorting Triangles based on angles and lengths of sides			

## 4<sup>th</sup> Grade Math- Activity Section IV

Standards: 4.NF.C.6 and 4.NF.C.7

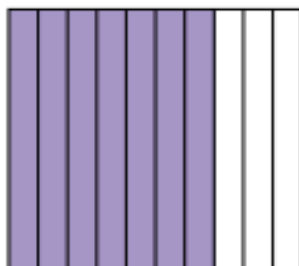
### Name the Same Amount

Study the example showing ways to name the same amount as a fraction and a decimal. Then solve problems 1–7.

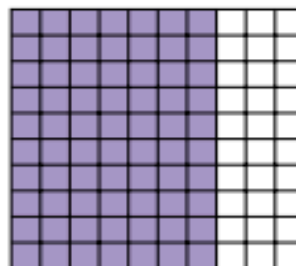
#### Example

How do you write decimals equivalent to  $\frac{7}{10}$  and  $\frac{70}{100}$ ?

The model shows  $\frac{7}{10}$ .



The model shows  $\frac{70}{100}$ .



A place-value chart shows the value of  $\frac{7}{10}$  and  $\frac{70}{100}$ .

$$\frac{7}{10} = 0.7 \quad \frac{70}{100} = 0.70$$

Ones	.	Tenths	Hundredths
0	.	7	0

- 1 What decimal is equivalent to  $\frac{3}{10}$ ?

Fill in the place-value chart to show the decimal.

Ones	.	Tenths
	.	

- 2 What decimal is equivalent to  $\frac{55}{100}$ ?

Fill in the place-value chart to show the decimal.

Ones	.	Tenths	Hundredths
	.		

- 3 Write a decimal equivalent to  $\frac{75}{100}$ . \_\_\_\_\_

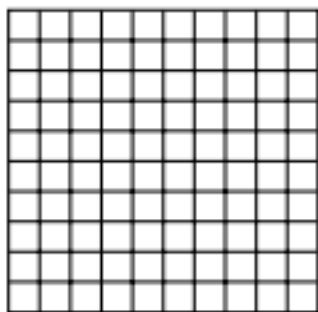
#### Vocabulary

**decimal fraction (or decimal)** a number containing a decimal point that separates a whole from fractional place values, such as tenths and hundredths.

0.7 and 0.70 are decimals.

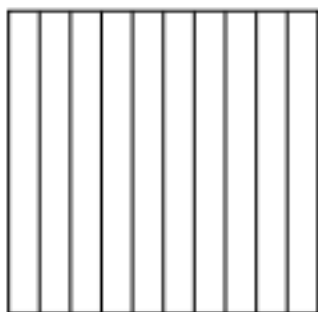
**Solve.**

- 4 What decimal is equivalent to  $\frac{80}{100}$ ? Shade the model below to show the fraction and the decimal. Then write the decimal.



$$\frac{80}{100} = \underline{\hspace{2cm}}$$

- 5 Look at problem 4. Shade the model below to show an equivalent tenths fraction and decimal. Then write the fraction and decimal.



$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

- 6 Use what you know about equivalent fractions to explain why 0.8 and 0.80 are equivalent.

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- 7 Find the sum of  $\frac{80}{100}$  and  $\frac{20}{100}$ . Then use what you know about equivalent fractions to explain why  $0.8 + 0.2 = 1$ .

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Study the example showing ways to compare fractions. Then solve problems 1–6.

**Example**

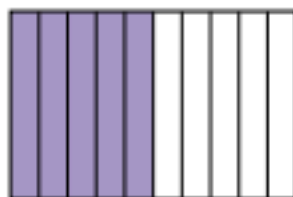
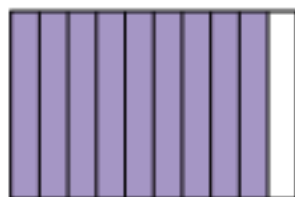
Compare  $\frac{9}{10}$  and  $\frac{5}{10}$ .

The model shows  $\frac{9}{10}$ .

The model shows  $\frac{5}{10}$ .

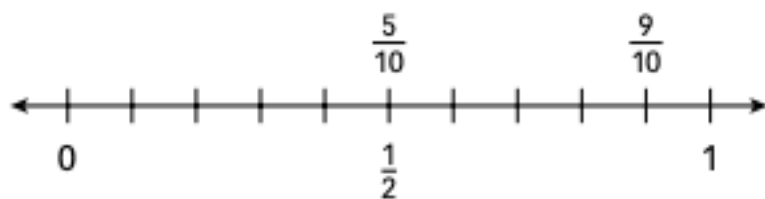
Use models.

$$\frac{9}{10} > \frac{5}{10}$$



Use a number line and the fraction  $\frac{1}{2}$  as a benchmark.

$$\frac{9}{10} > \frac{5}{10}$$

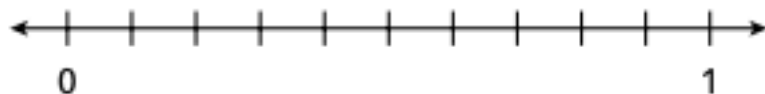


$$\frac{9}{10} > \frac{1}{2} \text{ and } \frac{5}{10} = \frac{1}{2}$$

- 1** Label  $\frac{2}{10}$  and  $\frac{6}{10}$  on the number line below.

Write a symbol to compare the two fractions.

$$\frac{2}{10} \text{ — } \frac{6}{10}$$

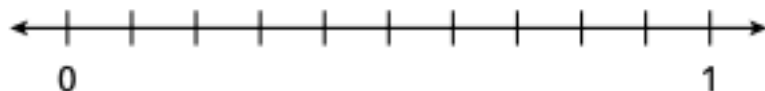


- 2** Look at problem 1. Explain how to use the fraction  $\frac{1}{2}$  as a benchmark to compare  $\frac{2}{10}$  and  $\frac{6}{10}$ .

- 3** Label  $\frac{10}{10}$  and  $\frac{8}{10}$  on the number line below.

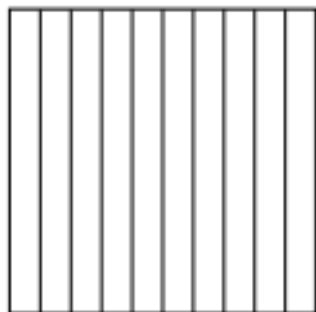
Write a symbol to compare the two fractions.

$$\frac{10}{10} \text{ — } \frac{8}{10}$$

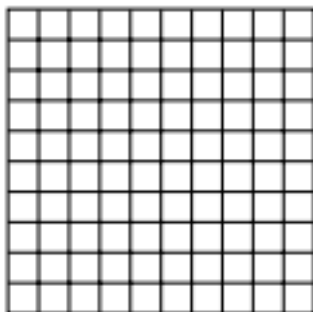


**Solve.**

- 4 Shade and label the models below to show  $\frac{3}{10}$  and  $\frac{3}{100}$ .  
Write a symbol to compare the fractions.  $\frac{3}{10}$  \_\_\_\_\_  $\frac{3}{100}$



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- 5 Use the symbols  $<$ ,  $>$ , and  $=$  to compare the fractions.

a.  $\frac{5}{10}$  \_\_\_\_\_  $\frac{50}{100}$

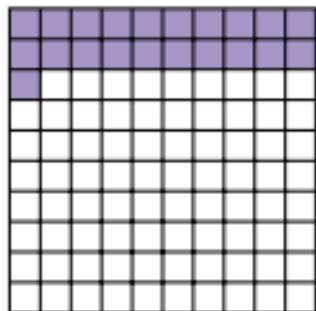
b.  $\frac{4}{10}$  \_\_\_\_\_  $\frac{4}{100}$

c.  $\frac{11}{10}$  \_\_\_\_\_  $\frac{12}{10}$

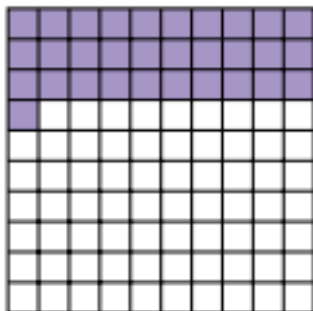
d.  $\frac{62}{100}$  \_\_\_\_\_  $\frac{6}{10}$

e.  $\frac{9}{100}$  \_\_\_\_\_  $\frac{9}{10}$

- 6 Write the fraction that each model shows. Explain which fraction is greater.



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## Compare Tenths and Hundredths Decimals

Study the example problem showing how to compare tenths and hundredths decimals. Then solve problems 1–6.

### Example

Colin lives 0.6 mile from school and 0.65 mile from the park. Which place is closer to his home?

Write each decimal as an equivalent fraction.

$$0.6 = \frac{6}{10} \quad 0.65 = \frac{65}{100}$$

Write the tenths fraction as a hundredths fraction.

$$\frac{6}{10} = \frac{60}{100}$$

Compare hundredths fractions.

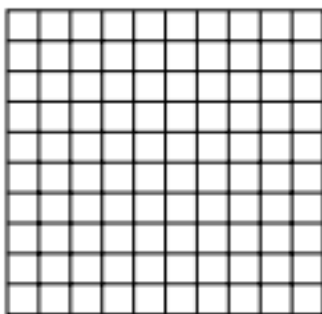
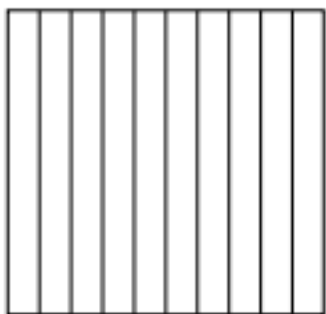
$$\frac{60}{100} < \frac{65}{100}$$

$$0.6 < 0.65$$

The school is closer to his home.

Lucas bought 0.6 pound of fish and 0.85 pound of shrimp to make a stew.

- 1 Shade the models below to compare 0.6 and 0.85.



- 2 Write a symbol to compare the decimals.  $0.6$  \_\_\_\_  $0.85$
- 3 Did Lucas buy more fish or shrimp?  
Use equivalent fractions to explain your answer.

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**Solve.**

- 4 Compare 0.2 and 0.25 using  $>$ ,  $=$ , or  $<$ . Use equivalent fractions to explain your answer.

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- 5 Compare 0.09 and 0.1 using  $>$ ,  $=$ , or  $<$ . Use a place-value chart to explain your answer.

Ones	.	Tenths	Hundredths
	.		
	.		

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- 6 Write the decimals 1.00, 0.20, and 0.03 in the place-value chart below. Which number is the greatest? Which number is the least? Use equivalent fractions to explain.

Ones	.	Tenths	Hundredths
	.		
	.		
	.		

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# ACTIVITY SET IV- ANSWER KEY

- 1 What decimal is equivalent to  $\frac{3}{10}$ ?

Fill in the place-value chart to show the decimal.

Ones	-	Tenths
0	-	3

- 2 What decimal is equivalent to  $\frac{55}{100}$ ?

Fill in the place-value chart to show the decimal.

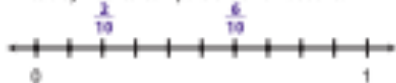
Ones	-	Tenths	Hundredths
0	-	5	5

- 3 Write a decimal equivalent to  $\frac{75}{100}$ . 0.75

- 1 Label  $\frac{2}{10}$  and  $\frac{6}{10}$  on the number line below.

Write a symbol to compare the two fractions.

$$\frac{2}{10} < \frac{6}{10}$$



- 2 Look at problem 1. Explain how to use the fraction  $\frac{1}{2}$

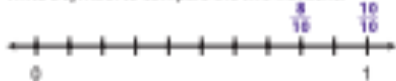
as a benchmark to compare  $\frac{2}{10}$  and  $\frac{6}{10}$ .

$\frac{1}{2} = \frac{5}{10}$ .  $\frac{2}{10}$  is less than  $\frac{5}{10}$  and  $\frac{6}{10}$  is greater than  $\frac{5}{10}$ , so  $\frac{2}{10}$  is less than  $\frac{6}{10}$ .

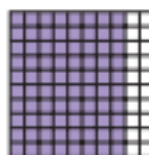
- 3 Label  $\frac{10}{100}$  and  $\frac{8}{10}$  on the number line below.

Write a symbol to compare the two fractions.

$$\frac{10}{100} > \frac{8}{10}$$

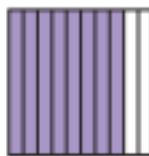


- 4 What decimal is equivalent to  $\frac{80}{100}$ ? Shade the model below to show the fraction and the decimal. Then write the decimal.



$$\frac{80}{100} = \underline{0.80}$$

- 5 Look at problem 4. Shade the model below to show an equivalent tenths fraction and decimal. Then write the fraction and decimal.



$$\frac{8}{10} = \underline{0.8}$$

- 6 Use what you know about equivalent fractions to explain why 0.8 and 0.80 are equivalent.

Answers will vary. Possible explanation:  $0.8 = \frac{8}{10}$  and  $0.80 = \frac{80}{100}$ .

$\frac{8}{10}$  is equivalent to  $\frac{80}{100}$  because  $\frac{8}{10} \times \frac{10}{10} = \frac{80}{100}$ . So,  $0.8 = 0.80$ .

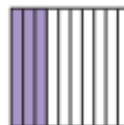
- 7 Find the sum of  $\frac{80}{100}$  and  $\frac{20}{100}$ . Then use what you know about equivalent fractions to explain why

$$0.8 + 0.2 = 1.$$

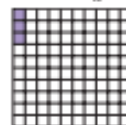
Answers will vary. Possible explanation:  $\frac{80}{100} + \frac{20}{100} = \frac{100}{100} = 1$ . Write  $\frac{80}{100}$  and  $\frac{20}{100}$  as

tenths fractions.  $\frac{80}{100} = \frac{8}{10}$  and  $\frac{20}{100} = \frac{2}{10}$ .  $\frac{8}{10} + \frac{2}{10} = \frac{10}{10} = 1$ . So,  $0.8 + 0.2 = 1$ .

- 8 Shade and label the models below to show  $\frac{2}{10}$  and  $\frac{3}{100}$ . Write a symbol to compare the fractions.  $\frac{2}{10} > \frac{3}{100}$



$$\frac{2}{10}$$



$$\frac{3}{100}$$

Possible shading shown.

- 9 Use the symbols  $<$ ,  $>$ , and  $=$  to compare the fractions.

a.  $\frac{5}{10} = \frac{50}{100}$

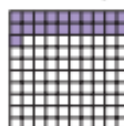
b.  $\frac{4}{10} > \frac{4}{100}$

c.  $\frac{11}{10} < \frac{11}{10}$

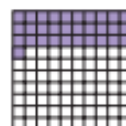
d.  $\frac{82}{100} > \frac{8}{10}$

e.  $\frac{9}{100} < \frac{9}{10}$

- 10 Write the fraction that each model shows. Explain which fraction is greater.



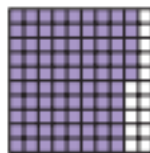
$$\frac{31}{100}$$



$$\frac{31}{100}$$

$\frac{31}{100} > \frac{21}{100}$ . Possible explanation: Both fractions have the same denominator so compare the numerators,  $31 > 21$ .

- 1 Shade the models below to compare 0.6 and 0.85.



Possible shading shows.  
Six tenths and 85 hundredths  
should be shaded.

- 2 Write a symbol to compare the decimals.  $0.6 < 0.85$

- 3 Did Lucas buy more fish or shrimp?

Use equivalent fractions to explain your answer.

Lucas bought more shrimp. Explanations will vary. Possible explanation:

$$0.85 = \frac{85}{100} \text{ and } 0.6 = \frac{60}{100} = \frac{60}{100} > \frac{60}{100}, \text{ so } 0.85 \text{ is greater than } 0.6.$$

- 4 Compare 0.2 and 0.25 using  $>$ ,  $=$ , or  $<$ . Use equivalent fractions to explain your answer.

Explanations will vary. Possible explanation:  $0.2 = \frac{2}{10}$  or  $\frac{20}{100}$ .  $0.25 = \frac{25}{100}$ .  
 $\frac{20}{100} < \frac{25}{100}$  because  $20 < 25$ . So,  $0.2 < 0.25$ .

- 5 Compare 0.09 and 0.1 using  $>$ ,  $=$ , or  $<$ . Use a place-value chart to explain your answer.

Ones	Tenths	Hundredths
0	0	9
0	1	0

Explanations will vary. Possible explanation: Compare tenths. The tenths digits are different. 1 tenth is greater than 0 tenths. So,  $0.1 > 0.09$ .

- 6 Write the decimals 1.00, 0.20, and 0.03 in the place-value chart below. Which number is the greatest? Which number is the least? Use equivalent fractions to explain.

Ones	Tenths	Hundredths
1	0	0
0	2	0
0	0	3

Explanations will vary. Possible explanation: 1.00 is the greatest because 1 equals a whole. 0.2 and 0.03 are fractions of a whole.  $1 = \frac{100}{100}$ ;  $0.2 = \frac{20}{100}$  and  $0.03 = \frac{3}{100}$ . Compare the numerators of the three fractions. 100 is greater than 20; 20 is greater than 3.  $\frac{3}{100}$  is the least, so 0.03 is the least.