

## **6th Grade Lesson Plans**

**This is a review.**

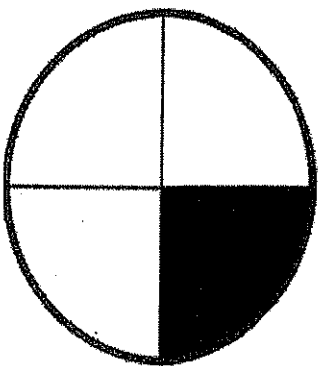
**April 20 - Year 5 Fraction Pre-Test**

**April 22 - Types of Fractions, Unit Fractions, Comparing Unit Fractions**

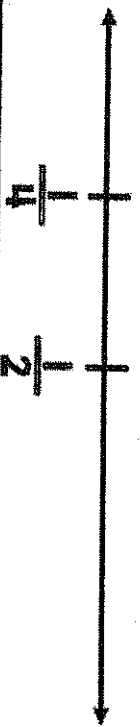
**April 27 - Adding Fractions, Subtracting Fractions, Equivalent Fractions,  
Comparing Fractions with related denominators**

**April 29 - Comparing and Ordering Fractions, Comparing Fractions with related  
denominators.**

# Unit Fraction

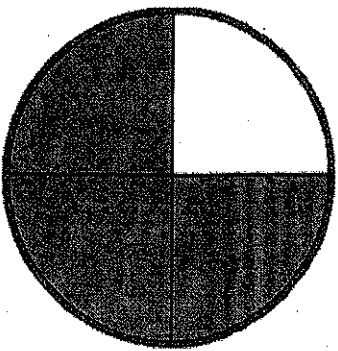


A unit fraction is represented by a one as the numerator, and a number larger than one as the denominator.



# Proper Fraction

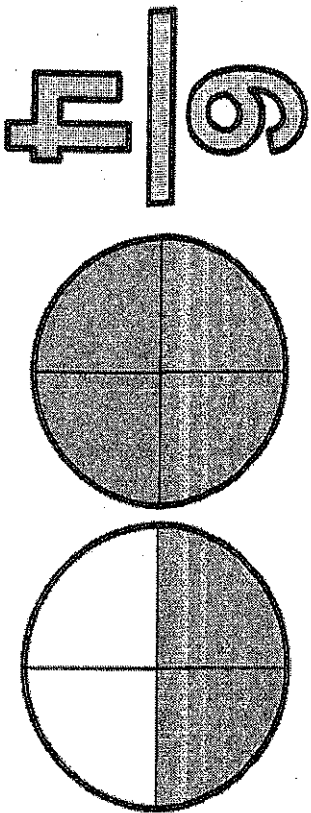
$$\frac{3}{4}$$



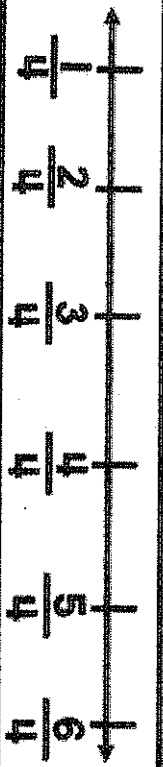
A proper fraction has a denominator that is larger than the numerator.



# Improper Fraction

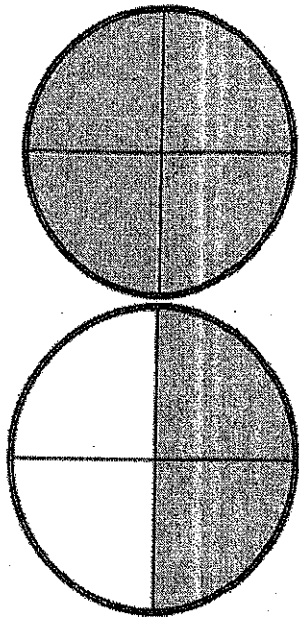


An improper fraction has a numerator that is larger than the denominator.

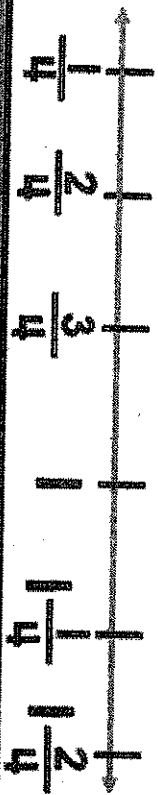


# Mixed Fraction

$$1\frac{2}{4}$$



A mixed fraction has a whole number and a proper fraction.



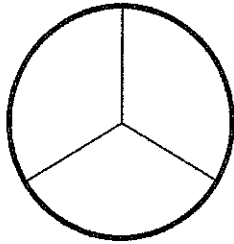
April 20

Year 6 Fraction Pre-Test

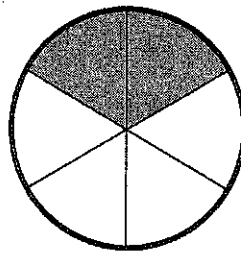
Name

Tick the fractions that correctly show one-third

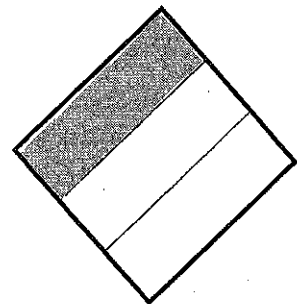
a)



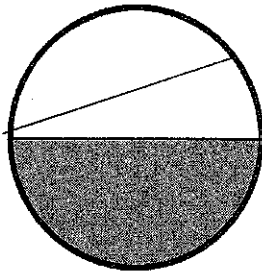
b)



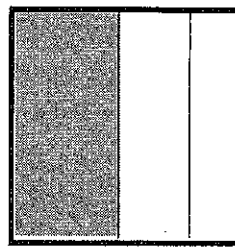
c)



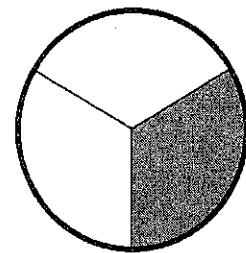
d)



e)

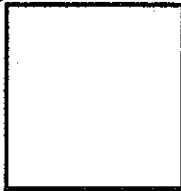
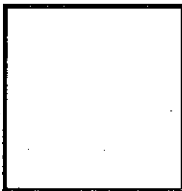


f)

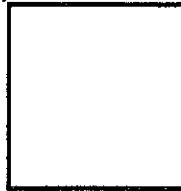


Use the blank fraction models to show the following fractions  
You may not need every fraction model.

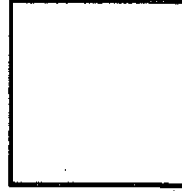
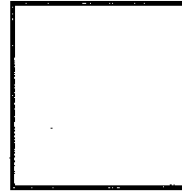
$$\frac{1}{3}$$



$$\frac{6}{4}$$



$$1\frac{3}{5}$$



Complete the following fraction sums

$$\frac{2}{4} + \frac{2}{4} =$$

$$\frac{3}{5} + \frac{4}{5} =$$

$$\frac{3}{8} + \frac{1}{2} =$$

$$\frac{9}{10} - \frac{4}{10} =$$

$$1 - \frac{2}{3} =$$

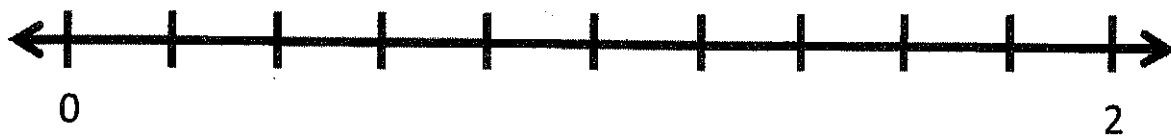
$$4 + \frac{3}{3} =$$

April 20

Provide two examples of each type of fraction

Unit Fraction	Proper Fraction	Mixed Fraction	Improper Fraction

Place as many fractions as you can on the following number line



Solve the following word problems

Show your working out

Mrs Baker sells pies. She sold  $\frac{2}{4}$  of a blueberry pie,  $\frac{3}{4}$  of a strawberry pie and  $\frac{1}{2}$  of an apricot pie.

**How much was sold altogether?**

Harvey had 4 packets of biscuits to share with his friends. Harvey was starving so he ate  $\frac{4}{4}$  of a packet. His two friends, Frank and Rosa, each ate  $\frac{2}{4}$ . Lastly, Harvey's friend Matt ate  $\frac{3}{4}$  of a packet.

**What is the remaining amount of the biscuits?**

Complete the fraction sequence

$\frac{1}{5}$

$\frac{2}{5}$

$\frac{3}{5}$

$\frac{4}{5}$

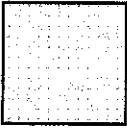
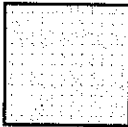
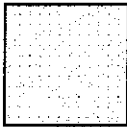
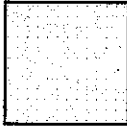
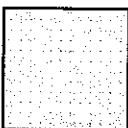
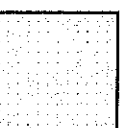
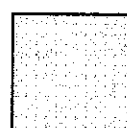
1





Describe the fraction sequence above.

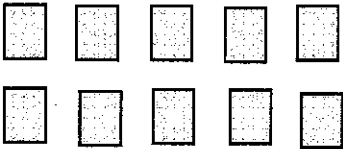
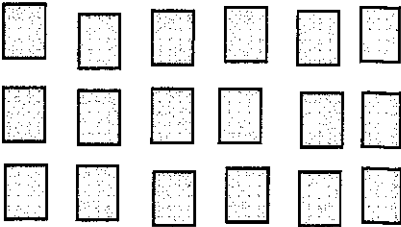
April 20

Compare the following fractions by using < = >			
$\frac{3}{4}$		$\frac{5}{8}$	
$\frac{2}{6}$		$\frac{1}{3}$	
$\frac{1}{5}$		$\frac{1}{8}$	
$\frac{1}{9}$		$\frac{1}{5}$	
$\frac{12}{6}$		2	
$\frac{2}{8}$		$\frac{5}{8}$	
$\frac{3}{3}$		$\frac{9}{9}$	Justify your response

Place the following fractions on the number line

$\frac{1}{10}$        $\frac{5}{10}$        $\frac{2}{5}$        $\frac{1}{2}$        $\frac{10}{10}$        $\frac{4}{10}$



Find a fraction of these quantities		
How many squares is in $\frac{1}{5}$ ?	Circle $\frac{2}{3}$ of the squares	Find $\frac{1}{4}$ of 24
		
Draw a diagram to demonstrate $\frac{2}{3}$ of 12.		



# Types of Fractions

Give an explanation for each type of fraction

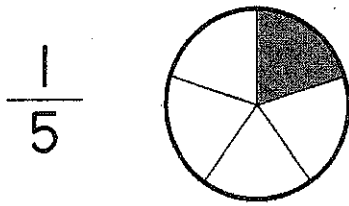
Improper Fraction	Unit Fraction
Proper Fraction	Mixed Fraction

Colour code the following fractions

Mixed Fraction: Blue    Proper Fraction: Yellow    Improper Fraction: Green    Unit Fraction: Pink

$\frac{1}{4}$	$\frac{3}{2}$	$\frac{1}{8}$	$\frac{9}{4}$	$1\frac{1}{10}$
$1\frac{2}{3}$	$\frac{11}{4}$	$\frac{2}{4}$	$\frac{7}{6}$	$\frac{2}{20}$
$\frac{200}{100}$	$\frac{1}{5}$	$\frac{1}{100}$	$\frac{8}{6}$	$\frac{6}{8}$
$\frac{1}{17}$	$21\frac{1}{2}$	$\frac{40}{4}$	$\frac{1}{10}$	$2\frac{1}{5}$
$\frac{4}{8}$	$\frac{6}{2}$	$\frac{5}{13}$	$5\frac{1}{3}$	$\frac{8}{3}$

# Unit Fractions



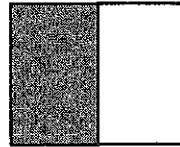
A unit fraction is a fraction where the numerator is always one, and the denominator is more than one

1) Circle the unit fractions

$\frac{1}{100}$

$\frac{1}{5}$

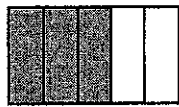
$\frac{3}{1}$



$\frac{1}{10}$

$\frac{2}{5}$

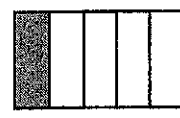
$\frac{1}{8}$



$\frac{1}{1}$

$\frac{1}{7}$

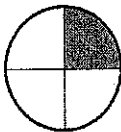
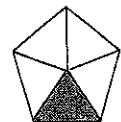
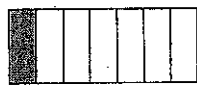
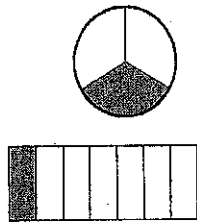
$\frac{14}{10}$



2) Write five of your own unit fractions

\_\_\_\_\_

3) Match the unit fractions with the fraction models



$\frac{1}{4}$

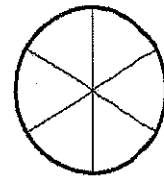
$\frac{1}{6}$

$\frac{1}{7}$

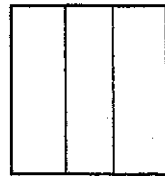
$\frac{1}{3}$

$\frac{1}{5}$

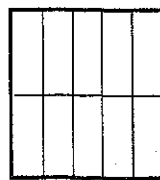
4) Colour in the fraction models to represent the following unit fractions



$\frac{1}{6}$



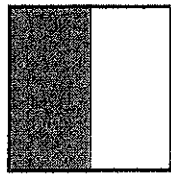
$\frac{1}{3}$



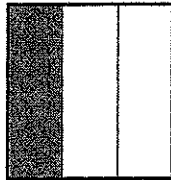
$\frac{1}{10}$

# Comparing Unit Fractions

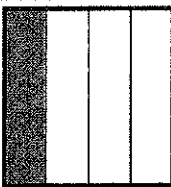
1) Write the unit fraction beside each fraction model



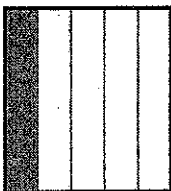
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

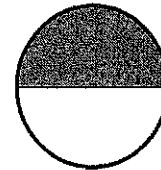
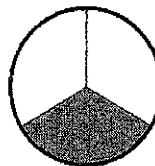
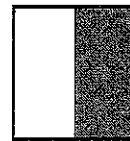
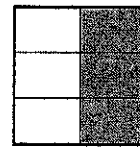
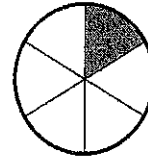
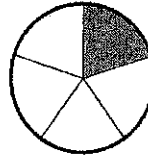
What do you notice about the size of shaded fraction as the denominator increases?

Complete this sentence

The larger the \_\_\_\_\_

the smaller the fraction pieces

2) Use  $<$   $>$   $=$  to compare the fractions

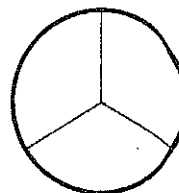
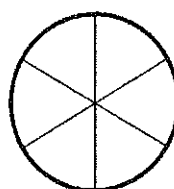


3) Solving Word Problems

I have a blueberry pie and a strawberry pie. I decide to eat one piece from each pie. Which pie will have largest amount leftover? Use the fraction model and explain your answer below.

Blueberry pie

Strawberry pie

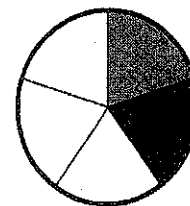


Working Out/Explanation

# Adding Fractions

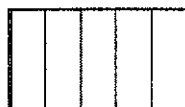
When we add fractions with the same denominator, the denominator stays the same

$$\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$$

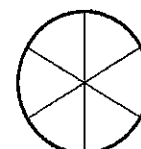


1) Use the fraction models to complete the following fraction sums

$$\frac{1}{5} + \frac{3}{5} = \frac{\quad}{5}$$



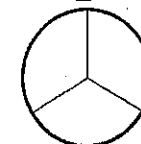
$$\frac{2}{6} + \frac{3}{6} = \frac{\quad}{6}$$



$$\frac{5}{6} + \frac{1}{6} = \frac{\quad}{6}$$



$$\frac{1}{3} + \frac{1}{3} = \frac{\quad}{3}$$

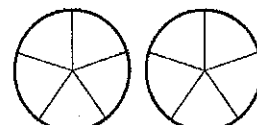


2) Complete the following fractions addition sums using the fraction models. Use two different colours to shade the fraction models

$$\frac{5}{6} + \frac{3}{6} = 1\frac{2}{6}$$



$$\frac{3}{5} + \frac{4}{5} = \frac{\quad}{5}$$



$$\frac{2}{4} + \frac{3}{4} = \frac{\quad}{4}$$



$$\frac{2}{3} + \frac{2}{3} + \frac{3}{3} = \frac{\quad}{3}$$



3) Complete these fraction sums. Show the answer as both an improper fraction and a mixed fraction.

$$\frac{4}{5} + \frac{4}{5} = \frac{8}{5} = 1\frac{3}{5}$$

$$\frac{4}{10} + \frac{7}{10} = \frac{\quad}{10} = \frac{\quad}{10}$$

$$\frac{6}{8} + \frac{3}{8} = \frac{\quad}{8} = \frac{\quad}{8}$$

$$\frac{3}{5} + \frac{4}{5} = \frac{\quad}{5} = \frac{\quad}{5}$$

$$\frac{10}{20} + \frac{15}{20} = \frac{\quad}{20} = \frac{\quad}{20}$$

$$\frac{6}{10} + \frac{9}{10} = \frac{\quad}{10} = \frac{\quad}{10}$$

$$\frac{6}{8} + \frac{7}{8} = \frac{\quad}{8} = \frac{\quad}{8}$$

5 friends bought pizza for dinner. Tom ate  $\frac{3}{8}$  of a pizza. Mark was incredibly hungry so he ate double what Tom ate. Sarah ate  $\frac{2}{8}$  of a pizza. Rosemary ate half of an entire pizza. Tara ate  $\frac{1}{8}$  of a pizza because she wasn't very hungry. Altogether, how much pizza was eaten?

# Subtracting Fractions

To subtract fractions, the denominator stays the same while the numerator changes.

$$\frac{5}{5} - \frac{3}{5} = \frac{2}{5}$$

$$\frac{6}{10} - \frac{5}{10} = \frac{1}{10}$$

1) Complete these subtraction sums

$$\frac{7}{20} - \frac{5}{5} = \frac{\quad}{5}$$

$$\frac{6}{15} - \frac{3}{15} = \frac{\quad}{\quad}$$

These subtraction sums involve a mixed fraction. You may find it easier to convert it to an improper fraction to solve.

$$1 \frac{2}{8} - \frac{5}{8} = \frac{10}{8} - \frac{5}{8} = \frac{5}{8}$$

2) Complete these subtraction sums

$$1 \frac{3}{5} - \frac{4}{5}$$

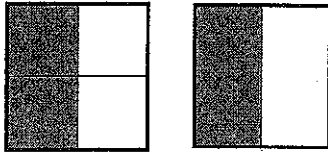
$$1 \frac{6}{10} - \frac{8}{10}$$

4) Complete the word problems

Two friends enjoyed a pizza. One friend ate  $\frac{3}{8}$  of the pizza and other ate half. What fraction of the pizza remains?

I had 2 blueberry pies. I ate  $\frac{3}{4}$  of the blueberry pie on Friday, and  $\frac{2}{4}$  on Saturday. How much pie is left?

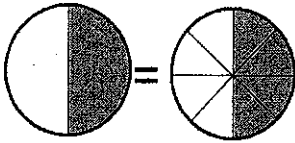
# Equivalent Fractions



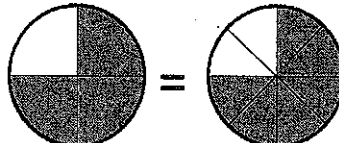
Equivalent fractions look different but they show the exact same amount.

Both fractions show one-half

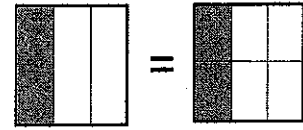
1) Write the equivalent fractions for the following fraction models



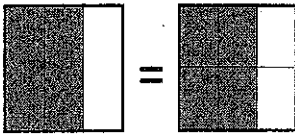
$$\frac{1}{2} = \frac{4}{8}$$



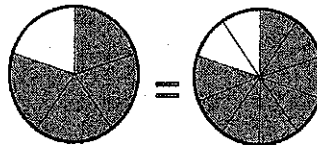
$$\frac{3}{4} = \frac{6}{8}$$



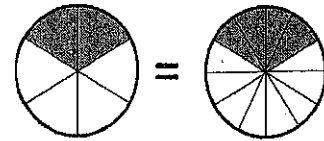
$$\frac{2}{3} = \frac{4}{6}$$



$$\frac{2}{3} = \frac{4}{6}$$

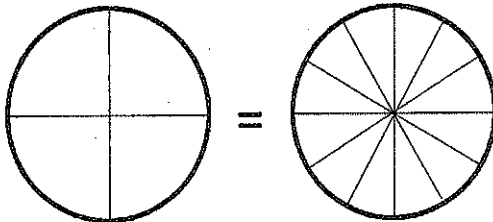


$$\frac{4}{5} = \frac{8}{10}$$

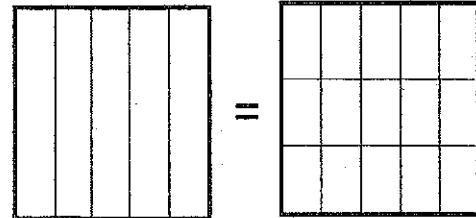


$$\frac{4}{6} = \frac{8}{12}$$

2) Shade the fraction models to show the equivalent fractions

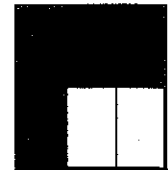
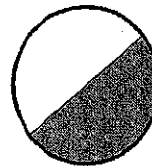
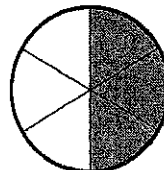
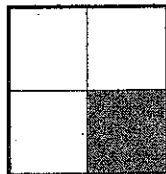
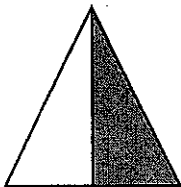
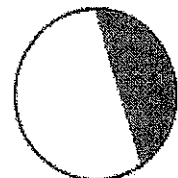
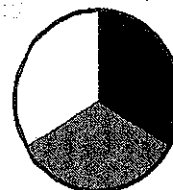
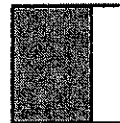
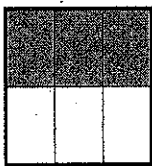


$$\frac{3}{4} = \frac{9}{12}$$



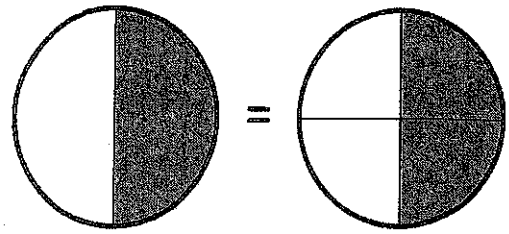
$$\frac{3}{5} = \frac{9}{15}$$

3) Circle the fractions that correctly show one-half



# Equivalent Fractions

Remember: Equivalent fractions may look different, but they are equal.  
Let's explore equivalent fractions without fraction models.



In this example,  $\frac{1}{2}$  is equal to  $\frac{2}{4}$ . This is because the numerator and the denominator have been multiplied by the same number to achieve the results.

$$\frac{1}{2} \xrightarrow[\times 2]{\times 2} \frac{2}{4}$$

$$\frac{3}{5} \xrightarrow[\times 3]{\times 3} \frac{9}{15}$$

$$\frac{2}{4} \xrightarrow[\times 3]{\times 3} \frac{6}{12}$$

$$\frac{5}{7} \xrightarrow[\times 4]{\times 4} \frac{20}{28}$$

1) Complete these equivalent fractions using the method above.

$$\frac{4}{5} = \frac{\quad}{20}$$

$$\frac{5}{10} = \frac{\quad}{100}$$

$$\frac{6}{8} = \frac{\quad}{16}$$

$$\frac{3}{5} = \frac{\quad}{60}$$

$$\frac{4}{6} = \frac{20}{\quad}$$

$$\frac{3}{4} = \frac{75}{\quad}$$

$$\frac{2}{8} = \frac{\quad}{64}$$

$$\frac{4}{7} = \frac{\quad}{35}$$

2) In the table below, shade the equivalent fractions as follows:

one-half = blue

one-third = yellow

three-quarters = green

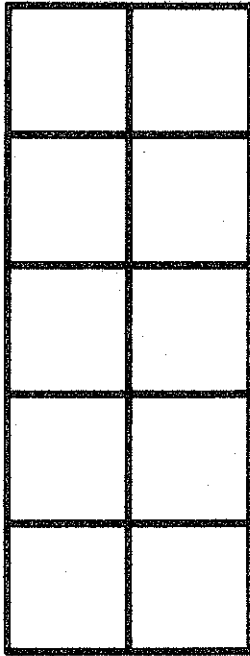
one-quarter = purple

$\frac{2}{4}$	$\frac{15}{20}$	$\frac{2}{8}$	$\frac{3}{6}$	$\frac{10}{30}$
$\frac{6}{24}$	$\frac{20}{40}$	$\frac{12}{24}$	$\frac{5}{20}$	$\frac{3}{12}$
$\frac{8}{32}$	$\frac{1}{4}$	$\frac{6}{18}$	$\frac{3}{4}$	$\frac{4}{12}$
$\frac{2}{6}$	$\frac{7}{21}$	$\frac{15}{60}$	$\frac{7}{14}$	$\frac{50}{150}$
$\frac{75}{100}$	$\frac{12}{36}$	$\frac{9}{27}$	$\frac{24}{32}$	$\frac{5}{15}$
$\frac{30}{90}$	$\frac{9}{36}$	$\frac{8}{24}$	$\frac{60}{180}$	$\frac{9}{18}$

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# Comparing Fractions with related denominators

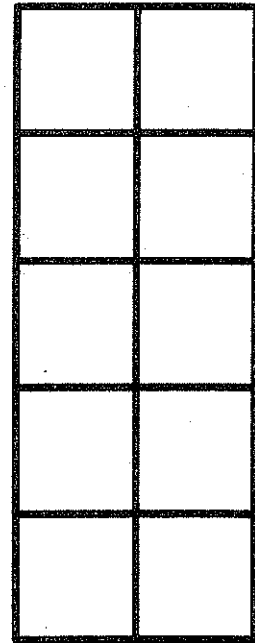
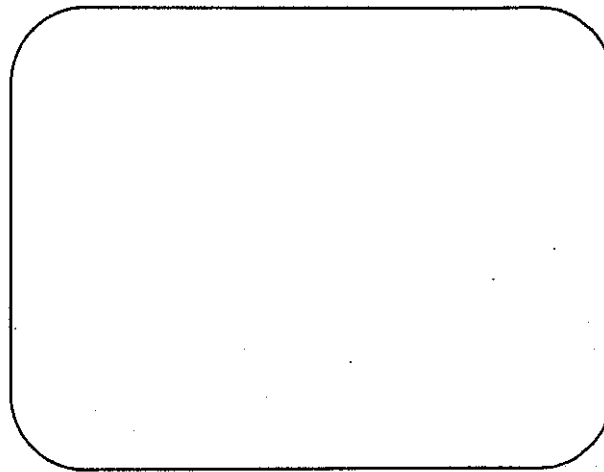
Related fractions have different denominators. Fractions with related denominators can be compared using fraction models.



three-fifths

$$\frac{3}{5}$$

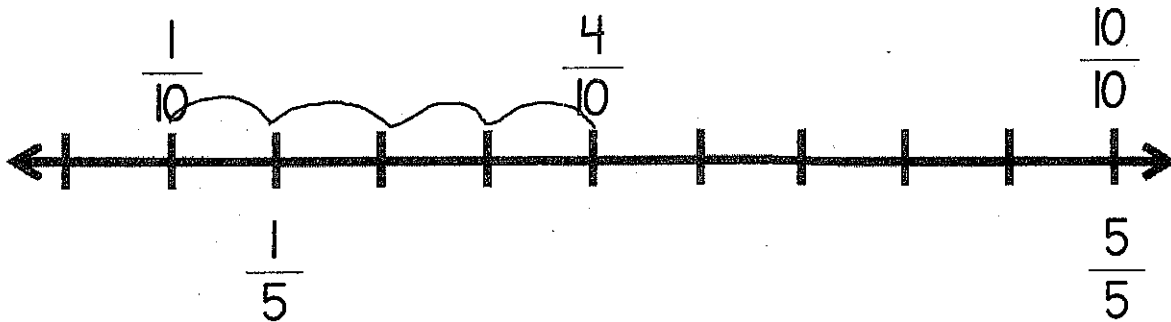
1) Shade the fraction model according to the instructions. Compare the Fraction models.  
Which fraction is greater? Explain your answer.



four-tenths

$$\frac{4}{10}$$

The fractions can also be compared using a number line



2) Use a blue pencil too show three fifths on the number line.

Does the answer on the number line match the fraction model?



# Comparing & Ordering Fractions

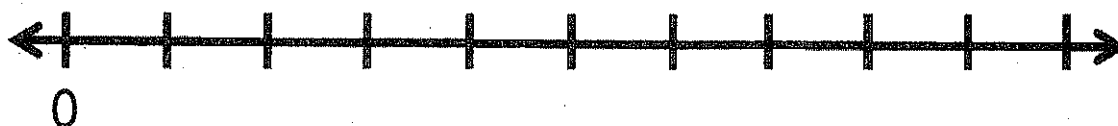
1) Order the following unit fractions from smallest to largest

$$\frac{1}{150} \quad \frac{1}{2} \quad \frac{1}{5} \quad \frac{1}{30} \quad \frac{1}{12} \quad \frac{1}{13}$$

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2) Connect the following fractions to the correct position on the number

$$\frac{1}{10} \quad \frac{5}{10} \quad \frac{3}{10} \quad 1 \quad \frac{1}{2}$$



Use the number line and the corresponding colours to show the following unit fractions

$$\frac{1}{12}$$

BLUE

$$\frac{1}{2}$$

GREEN

$$\frac{1}{3}$$

ORANGE

$$\frac{1}{4}$$

PURPLE

$$\frac{1}{6}$$

RED



$$\frac{2}{4}$$


$$\frac{3}{6}$$


$$\frac{1}{2}$$


Shade the fraction models according to the instructions. Write a statement that compares all three fraction models

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# Comparing Fractions with related denominators

Use one of the three methods to compare the following fractions. Show your working out and use  $< = >$

$\frac{4}{10}$ $\frac{1}{2}$	$\frac{4}{5}$ $\frac{2}{3}$
$\frac{5}{6}$ $\frac{7}{12}$	$\frac{6}{4}$ $\frac{4}{6}$
$\frac{7}{4}$ $\frac{3}{2}$	$\frac{6}{8}$ $\frac{3}{4}$