

### Dividing Fractions

$$1) 4\frac{1}{5} \div 3\frac{1}{2}$$

$$\frac{21}{5} \div \frac{7}{2}$$

$$\frac{21}{5} \times \frac{2}{7}$$

$$\frac{\cancel{21}^{(3)} \times \cancel{2}^{(1)}}{5 \times \cancel{7}^{(1)}} = \boxed{\frac{6}{5}}$$

$$2) 4\frac{1}{5} \div 3\frac{7}{10}$$

$$\frac{21}{5} \div \frac{37}{10}$$

$$\frac{21}{5} \cdot \frac{10}{37} = \boxed{\frac{42}{37}}$$

$$3) 2\frac{2}{3} \div 3\frac{2}{5}$$

$$\frac{8}{3} \div \frac{17}{5}$$

$$\frac{8}{3} \cdot \frac{5}{17} = \boxed{\frac{40}{51}}$$

$$4) 3\frac{7}{10} \div 4\frac{1}{3}$$

$$\frac{37}{10} \div \frac{13}{3}$$

$$\frac{37}{10} \cdot \frac{3}{13} = \boxed{\frac{111}{130}}$$

$$5) 2\frac{1}{3} \div 4\frac{1}{4}$$

$$\frac{7}{3} \div \frac{17}{4}$$

$$\frac{7}{3} \cdot \frac{4}{17} = \boxed{\frac{28}{51}}$$

$$6) 3\frac{4}{5} \div 2\frac{1}{3}$$

$$\frac{19}{5} \div \frac{7}{3}$$

$$\frac{19}{5} \cdot \frac{3}{7} = \boxed{\frac{57}{35}}$$

$$7) 4\frac{1}{10} \div 4\frac{4}{5}$$

$$\frac{41}{10} \div \frac{24}{5}$$

$$\frac{41}{10} \cdot \frac{5}{24} = \boxed{\frac{41}{48}}$$

$$8) 3\frac{3}{5} \div 3\frac{1}{2}$$

$$\frac{18}{5} \div \frac{7}{2}$$

$$\frac{18}{5} \cdot \frac{2}{7} = \boxed{\frac{36}{35}}$$

$$9) 4\frac{1}{3} \div 3\frac{1}{2}$$

$$\frac{13}{3} \div \frac{7}{2}$$

$$\frac{13}{3} \cdot \frac{2}{7} = \boxed{\frac{26}{21}}$$

$$10) 2\frac{1}{2} \div 2\frac{3}{5}$$

$$\frac{5}{2} \div \frac{13}{5}$$

$$\frac{5}{2} \cdot \frac{5}{13} = \boxed{\frac{25}{26}}$$

### Word Problems (1-6)

$$1) 2\frac{1}{2} \div 2$$

$$\frac{5}{2} \div \frac{2}{1}$$

$$\frac{5}{2} \cdot \frac{1}{2} = \boxed{\frac{5}{4} \text{ chocolate bars}}$$

$$2) 30\frac{1}{2} \div 4$$

$$\frac{61}{2} \div \frac{4}{1}$$

$$\frac{61}{2} \cdot \frac{1}{4} = \boxed{\frac{61}{8} \text{ acres}}$$

$$3) 3\frac{1}{3} \div 3$$

$$\frac{10}{3} \div \frac{3}{1}$$

$$\frac{10}{3} \cdot \frac{1}{3} = \boxed{\frac{10}{9} \text{ inches}}$$

$$4) \frac{3}{4} \div 2$$

$$\frac{3}{4} \div \frac{2}{1}$$

$$\frac{3}{4} \cdot \frac{1}{2} = \boxed{\frac{3}{8} \text{ in.}}$$

$$5) 2\frac{1}{3} \div 4$$

$$\frac{7}{2} \div \frac{4}{1}$$

$$\frac{7}{2} \cdot \frac{1}{4} = \boxed{\frac{7}{8} \text{ mile}}$$

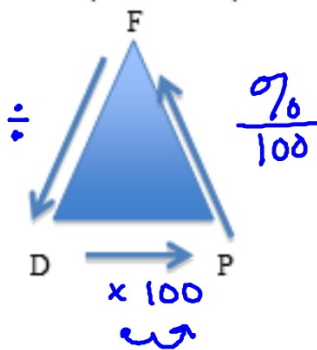
$$6) 625\frac{1}{2} \div 3$$

$$\frac{1251}{2} \div \frac{3}{1}$$

$$\frac{1251}{2} \cdot \frac{1}{3} = \boxed{\frac{417}{2} \text{ miles}}$$

When finished, get wbw #3, then copy these pictures and blanks onto index cards. Label your cards with the numbers in the corner of the box.

1. FRACTION, DECIMAL, PERCENT TRIANGLE:



2. FRACTIONS

a. Adding Fractions -

Get a Common Denominator, add the numerators

b. Subtracting Fractions:

Get a Common Denominator, Subtract the numerators

c. Multiple Fractions: Multiply the numerators, Multiply the denominator

d. Divide Fractions: Same, Change, Flip  
Keep the first fraction, Change the sign from divide to multiply, flip the last fraction.

Final answer no Common factors

### 3. REPEATING DECIMALS TO FRACTIONS

i. Write the numbers that are repeating in the numerator

(top).

ii. Place 9's in the denominator (bottom).

\*\*\*The number of 9's depends on the number of digits repeating\*\*\*\*

iii. Reduce your fraction.  
(no common factors)

Reading/Journaling ~ Explore

Using your calculator, write the decimal expansion of the following fractions.

1)  $\frac{4}{9}$

2)  $\frac{2}{9}$

3)  $\frac{23}{99}$

4)  $\frac{421}{999}$

5)  $\frac{56}{99}$

Describe what you noticed when these fractions were converted to decimals.  
What was significant about the numerator and denominator?

### Converting Repeating Decimals to Fractions

Step 1:

Identify the digits that are repeating

Step 2:

Are the repeating digits directly after the decimal?

Copy into  
your  
notebook

**Yes**

1) Write the digits that are repeating in the numerator.

2) Place 9's in the denominator.

\*\*\*The number of 9's depends on the number of digits repeating\*\*\*

3) Reduce Fraction

**No**

1) Multiply by 10, 100, 1000, etc. to move the repeating digits behind the decimal.

2) Write the new decimal number as a mixed number- write the whole number and write the digits that are repeating in the numerator. Place 9's in the denominator.

\*\*\*The number of 9's depends on the number of digits repeating\*\*\*

3) Undo multiplication by division...whatever you multiplied by in step 1, you must divide by before reducing the fraction (don't forget division rules!).

4) Reduce Fraction

## Repeating Decimals to Fractions

[https://learnzillion.com/lesson\\_plans/4937-convert-repeating-decimals-into-fractions](https://learnzillion.com/lesson_plans/4937-convert-repeating-decimals-into-fractions)

We will be taking notes on this video today together.

## Practice



[https://learnzillion.com/resources/52298?card\\_id=63591](https://learnzillion.com/resources/52298?card_id=63591)

**Write each decimal as a fraction:**

$$1) 0.\overline{3} = \frac{3}{9} = \frac{1}{3}$$

$$2) 0.\overline{18} = \frac{18}{99} = \frac{2\cancel{9}}{11\cancel{9}} = \frac{2}{11}$$

$$3) 2.\overline{2}$$

$$4) 3.\overline{63}$$

$$5) 0.2\overline{8}$$

$$6) 0.9\overline{7}$$



HW complete Worksheet repeating decimals to fractions

Week by Week Essentials #2 is due on Monday. Make sure you are showing work.