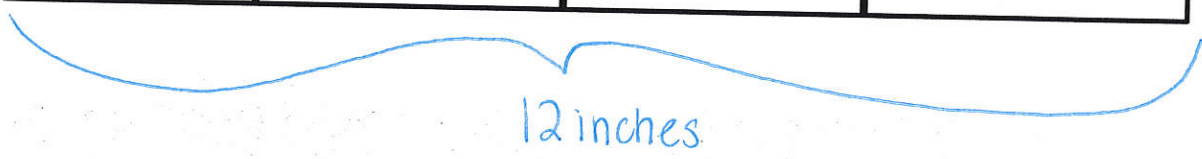


End of Module 2 Reteach

1. Erica decided to share her king size candy bar with three of her friends. If the candy bar is 12 inches long, how much will each friend get? Show your work below.

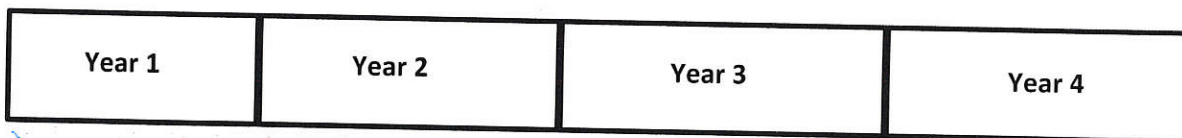
↳ Key word for division



$$12 \div 4 = \boxed{3 \text{ inches}}$$

The water level in a reservoir rises an average of $\frac{3}{4}$ inches every 4 years. Based on this rate, how much will the water level change after 1 year?

Any whole # can be written as a fraction by putting it over 1. $4 = \frac{4}{1}$



Keep $\frac{3}{4}$
change \div to $*$
Flip second
fraction

$$\frac{3}{4} \div \frac{4}{1} = \overset{K}{\frac{3}{4}} * \overset{C}{\frac{1}{4}} \overset{F}{=} \frac{3}{4} \text{ inches}$$

$$\boxed{\frac{3}{16} \text{ inches}}$$

Each year, it rises $\frac{3}{16}$ inches

How much would it change in 9 years?

In order to determine this, you would take the amount it changes in 1 year and multiply it by 9.

If it changes $\frac{3}{16}$ in 1 year, then we would $* 9$ for 9 years

$$\frac{3}{16} \overset{\text{multiply straight across}}{\begin{matrix} \rightarrow 9 \\ * \\ \rightarrow 1 \end{matrix}} = \frac{27}{16} = \boxed{1 \frac{11}{16} \text{ inches}}$$

Name: _____ Date: _____

In order to divide fractions, you must

KEEP CHANGE FLIP

Keep the first fraction, change division to multiplication and flip the second fraction.

Divide.

1. $5 \div \frac{1}{8} = 5 * 8 = 40$ 2. $6 \div \frac{3}{4} = 6 * \frac{4}{3} = \frac{24}{3} = 8$

3. $2 \div \frac{10}{12} = 2 * \frac{12}{10} = \frac{24}{10} = 2\frac{4}{10} = 2\frac{2}{5}$ 4. $2 \div \frac{1}{3} = 2 * 3 = 6$

1. $\frac{8}{12} \div \frac{7}{8} = \frac{8}{12} * \frac{8}{7} = \frac{64}{84} = \frac{32}{42} = \frac{16}{21}$

2. $\frac{4}{5} \div \frac{1}{4} = \frac{4}{5} * \frac{4}{1} = \frac{16}{5} = 3\frac{1}{5}$

3. $\frac{3}{4} \div \frac{4}{5} = \frac{3}{4} * \frac{5}{4} = \frac{15}{16}$

4. $\frac{1}{2} \div \frac{2}{3} = \frac{1}{2} * \frac{3}{2} = \frac{3}{4}$

1. $\frac{3}{8} \div 6 = \frac{3}{8} * \frac{1}{6} = \frac{3}{48}$ 2. $\frac{2}{4} \div 7 = \frac{2}{4} * \frac{1}{7} = \frac{2}{28} = \frac{1}{14}$

3. $\frac{2}{3} \div 3 = \frac{2}{3} * \frac{1}{3} = \frac{2}{9}$ 4. $\frac{5}{6} \div 8 = \frac{5}{6} * \frac{1}{8} = \frac{5}{48}$

5. $\frac{1}{2} \div 3 = \frac{1}{2} * \frac{1}{3} = \frac{1}{6}$ 6. $\frac{5}{12} \div 8 = \frac{5}{12} * \frac{1}{8} = \frac{5}{96}$

Name: _____ Date: _____

2. Marley spent \$75 to purchase tools for making birdhouses. For every birdhouse he makes, he must spend \$8.50 in materials, however he makes \$15. Let x represent the number of birdhouses he sells.

Write an expression representing his profit.

* **Profit = amount earned – amount spent** *

Here is one expression that represents his profit: $15x - 8.50x - 75$

Can you write two equivalent expressions for the one above?

$$\begin{array}{l} \underline{-8.50x + 15x - 75} \quad (\text{Rearranged order}) \\ \underline{6.50x - 75} \quad (\text{Combined Like Terms}) \end{array}$$

Why are we multiplying 15 and 8.50 by x ?

Because these terms will change based on the number of birdhouses he sells. The more birdhouses he sells, the more supplies he will have to purchase and the more money he will make.

Why are the last two terms negative (8.50 x and 75)?

Because they represent costs (expenses)

If Marley wants to earn a profit of \$400, how many birdhouses must he make?

Profit = amount earned – amount spent

$$400 = 15x - 8.50x - 75$$

OR

$$\begin{array}{r} 400 = 6.50x - 75 \\ + 75 \quad \quad + 75 \\ \hline \end{array}$$

$$\begin{array}{r} 475 = 6.50x \\ \hline 6.50 \quad 6.50 \end{array}$$

$$73.08 = x$$

He must make 74 birdhouses

This is a simplified expression.

Name: _____ Date: _____

3. Karl's current balance in his bank account is \$150. If he then uses his debit card to purchase a new phone that costs \$160 and then is charged a \$10 overdraft fee for insufficient funds (not enough money in his account), what is the minimum amount of money he must deposit into his account to then bring it to \$0?

- Debits/Fees/Purchases/Payments (made by you) are negative amounts
- Credits/Deposits represent positive amounts

First, determine what his balance will be after the purchase is made and the fee is charged. (Remember, purchases and fees are negative amounts)

$$\$150 - \$ \underline{160} - \$ \underline{10} = -\$20$$

OR

$$\$150 + (-\$ \underline{160}) + (-\$ \underline{10}) = -\$20$$

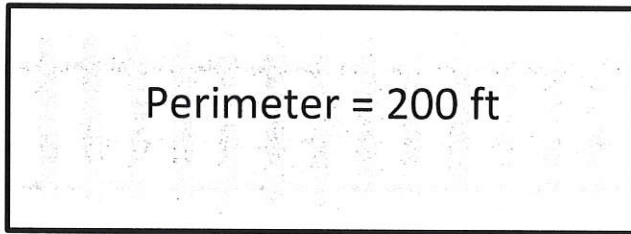
The opposite of this amount is what he would have to deposit.

The opposite of $-\$ \underline{20}$ is $\$ \underline{20}$.

Therefore, he would have to deposit $\$ \underline{20}$ into his account.

Name: _____ Date: _____

4. Maci wants to build a new fence in her backyard for her puppy. Her rectangular yard is twice as long as it is wide. The total perimeter of her yard is 200 feet. What are the dimensions (length and width) of her yard?



Width = W

$$\text{Length} = L = \underline{2W}$$

First you must know what perimeter means. **It is the distance around the outside of an object.** To find it, you must add up all the sides. The formula for perimeter of a rectangle is as follows:

$$\text{Perimeter} = L + W + L + W$$

Now, let's use this to solve our problem.

$$200 = L + W + L + W$$

$$200 = (2W) + W + (2W) + W$$

$$\frac{200}{6} = \frac{6W}{6}$$

$$33.3 = W$$

Follow the steps for solving equations in order to find W . Then plug in the value of W for the expression you wrote for L . DON'T FORGET UNITS!

$$W = \underline{33.3} \text{ feet or } 33\frac{1}{3} \text{ feet}$$

$$L = 2W = 2(\underline{33.3}) = \underline{66.6} \text{ feet or } 66\frac{2}{3} \text{ feet}$$