

Fraction Applications

1. There are 20 animals at the circus. One half are dogs, one tenth are bears, one fifth are fish, and the rest are lions. How many dogs, bears, fish and lions are there?
2. There were 3 frogs and 20 bugs at the pond. The 1st frog ate $\frac{1}{2}$ of the bugs. The 2nd frog ate $\frac{1}{5}$ of the bugs. How many did the 1st frog eat, the 2nd frog eat, and how many were left for the last frog?
3. On Wednesday I ate half of a pizza. On Thursday, I ate half of what was left. On Friday I ate half of what was left from Thursday.

What fraction of the original pizza is left to eat on Saturday?

4. For his party, Justin bought a Super-Duper Pizza and cut it into 24 pieces. At the party, Mary ate $\frac{1}{6}$ of the pizza, Veronica ate $\frac{1}{4}$ of it, and Ron ate $\frac{1}{3}$ of it. Justin ate the rest. How many pieces did Justin eat?
5. A girl spent $\frac{1}{3}$ of the day sleeping. $\frac{1}{4}$ of the day at school and played for $\frac{1}{12}$ of the day. How many hours of the day were left?
6. Sam and Becky love pizza, and would eat it every day of the week if they could. And sometimes they do.
 - a. On Sunday, Sam and Becky had 3 pizzas to divide evenly between them. How much pizza does each get?
 - b. On Monday, Sam and Becky had $1\frac{1}{2}$ pizzas to divide evenly between them. How much does each get?
 - c. On Tuesday, Sam and Becky had $2\frac{3}{4}$ pizzas to divide evenly between them. How much does each get?
 - d. On Wednesday, Sam and Becky had $3\frac{1}{4}$ pizzas to divide evenly between them. How much does each get?
 - e. On Thursday, Sam and Becky had $1\frac{2}{3}$ pizzas to divide evenly between them. How much does each get?
 - f. On Friday, they ate lasagna.
 - g. On Saturday, they decided that since they hadn't had for two whole days, they would have a pizza party. Altogether there are 8 people and 10 pizzas. How much pizza would each person get?
7. At a baseball match, there were 20,000 spectators. A fifth of the spectators were in the member's enclosure, a quarter were in the public seats and the remaining were sitting on the grass around the field. How many spectators were sitting on the grass?

8. Here is a great recipe for brownies.

- 1 C butter or margarine, softened
- 2 C granulated sugar
- 4 eggs
- 2 t vanilla
- 1 $\frac{1}{3}$ C flour
- $\frac{3}{4}$ C cocoa
- 1 t baking powder
- $\frac{1}{2}$ t salt
- $\frac{2}{3}$ C chopped nuts, optional
- $\frac{1}{3}$ C butter or margarine
- 2 (3-ounce) packages of cream cheese softened
- $\frac{1}{3}$ C granulated sugar
- 2 T flour
- 2 eggs
- $\frac{3}{4}$ t vanilla

Cream together liquid ingredients from top half of recipe. In a separate bowl, mix dry ingredients. Gradually add dry ingredients to wet ingredients and then add nuts. Do the same with the bottom ingredients. Spread half of the first batter into a greased baking pan. Spread second mixture over chocolate mixture. Then spread the remaining of the first mixture over the top. Swirl with a spatula or fork. Bake at 350 for 40 to 50 minutes or until brownie pulls away from side. Cool in pan. Cut in squares.

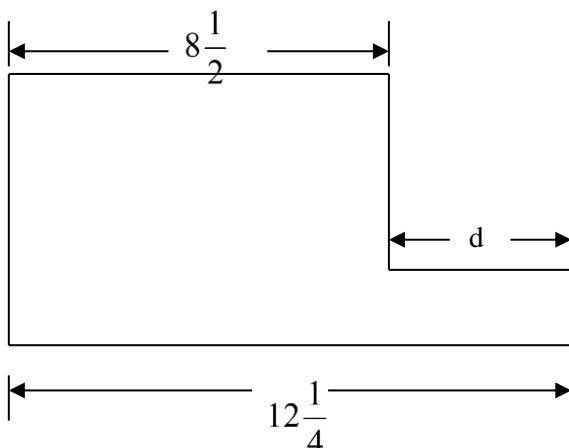
Assume that the recipe makes three and a half dozen brownies.

- a. How many brownies is this?
- b. If there are 21 students in the class and they can eat five brownies apiece, how many brownies do we need?
- c. How many batches of the recipe do we need for these 21 students?
- c. Re-write the ingredients list, using the correct amounts for half the recipe.
- d. Re-write the ingredients list, using the correct amounts for $\frac{1}{2}$ times the recipe.
- e. Re-write the ingredients list to make 105 brownies.

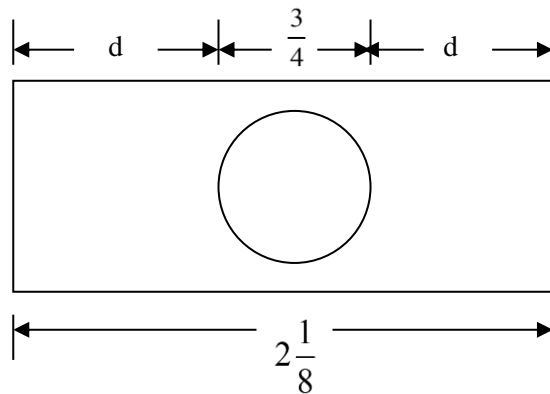
9. Arrange these fractions from smallest to largest.

$$\frac{3}{4} \qquad \frac{(3+1)}{(4+1)} \qquad \frac{(3-1)}{(4-1)}$$

10. Find the length marked d . All measurements are in inches.



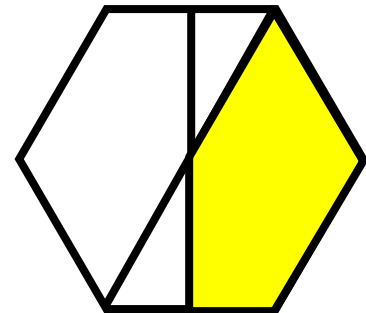
11. Find the length marked d . All measurements are in inches.



Challenge!

1. What is the four digit number in which the first digit is $\frac{1}{4}$ of the last digit, the second digit is 6 times the first digit, and the third digit is the second digit plus 3?

2. What fraction of the hexagon is shaded? Leave your answer as the simplest possible fraction.



3. Simplify $\frac{3}{1 + \frac{2}{5}}$
4. Ben had 7 times as many lollies as Joanna. Joanna had $\frac{3}{5}$ as many as Jan. If Jan has 20 lollies, how many does Ben have?