Name: _____ Date: _____

Thirty Guests and a Pancake Recipe for Six

Circle group

Say you want to make pancakes for thirty guests. Your recipe serves only six. You cannot just guess. You need a ratio. A ratio compares two amounts. Here it is thirty guests to six servings. Divide 30 by 6 and you get 5. So you must make the recipe five times.

Now look at the ingredients. The recipe for six needs 2 cups of flour, 3 eggs, and 1 teaspoon of salt. To make more, multiply every amount by 5. You will need 10 cups of flour, 15 eggs, and 5 teaspoons of salt. The ratio between the ingredients stays the same. So the pancakes should taste the same, too.

A cook must multiply every ingredient. If you change only the flour, the batter will be too thick or too thin. Math keeps the recipe in balance.

Some things do not just multiply. A huge batch will not fit in one small pan. You would cook in many rounds or use more pans. The cooking time for each pancake stays about the same. A pancake is still the same size. A smart cook uses math for the amounts and common sense for the rest.

Questions

1. How many times must the recipe be made for thirty guests?

_____

_____

2. What is a ratio?

_____

_____

3. How many eggs are needed for thirty guests?

_____

_____

4. What happens if you change only the flour?

_____

_____

5. Why multiply every ingredient by the same number?

_____

_____

6. Why does each pancake take about the same time to cook?

_____

_____

Words to know

ratio: a way to compare two amounts
ingredient: one of the foods that go into a recipe
batter: a runny mix of flour, milk, and eggs for cooking

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Thirty Guests and a Pancake Recipe for Six

Triangle group

Imagine you want to make pancakes for thirty guests, but your recipe serves only six. You cannot just guess. You need a ratio, which is a way to compare two amounts. Here the ratio is thirty guests to six servings. If you divide 30 by 6, you get 5. That means you need to make the recipe five times.

Now look at the ingredients list. The recipe for six calls for 2 cups of flour, 3 eggs, 1 teaspoon of salt, and half a cup of milk for each cup of flour. To scale it up, multiply every amount by 5. You will need 10 cups of flour, 15 eggs, and 5 teaspoons of salt. The ratio between the ingredients stays the same, so the pancakes should taste the same, too.

A cook must multiply every ingredient. If you change only the flour, the batter will come out too thick or too thin. Math keeps the whole recipe in balance.

Some things do not simply multiply, however. A huge batch will not fit in one small pan. You would cook it in several rounds or use more pans. The cooking time for each pancake stays about the same, too, because a pancake is still the same size. A smart cook uses math for the amounts and common sense for the rest.

Questions

1. How many times must the recipe be made to feed thirty guests?

_____

_____

2. What is a ratio?

_____

_____

3. How many eggs are needed for thirty guests?

_____

_____

4. What happens if you change only the amount of flour?

_____

_____

5. Why should every ingredient be multiplied by the same number?

_____

_____

6. Why does the cooking time for each pancake stay about the same?

_____

_____

Words to know

ratio: a way to compare two amounts
ingredient: one of the foods that go into a recipe
scale: to make bigger or smaller by the same amount
batter: a runny mix of flour, milk, and eggs for cooking

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Thirty Guests and a Pancake Recipe for Six

Square group

Imagine that you intend to make pancakes for thirty guests, but your recipe serves only six people. Guessing will not work, because you need a ratio, which is a way of comparing two amounts. In this case the ratio is thirty guests to six servings. When you divide 30 by 6, you get 5, which means you must prepare the recipe five times over.

Next, examine the list of ingredients. The recipe for six calls for 2 cups of flour, 3 eggs, and 1 teaspoon of salt. To scale it upward, you multiply every single amount by 5. You will therefore need 10 cups of flour, 15 eggs, and 5 teaspoons of salt. Because the ratio between the ingredients remains unchanged, the pancakes should taste exactly the same as the original.

A careful cook must multiply every ingredient. If you were to alter only the flour, the batter would turn out far too thick or far too thin. Math keeps the entire recipe in proper balance.

Some aspects of cooking, however, do not simply multiply. An enormous batch of batter cannot fit into one small pan, so you would cook it in several rounds or use additional pans. The cooking time for each pancake also remains about the same, because every pancake is still the same size. A sensible cook relies on math for the amounts and on common sense for everything else.

Questions

1. How many times must the recipe be prepared to feed thirty guests?

_____

_____

2. What is a ratio?

_____

_____

3. How many eggs are required for thirty guests?

_____

_____

4. What would happen if you altered only the amount of flour?

_____

_____

5. Why should every ingredient be multiplied by the same number?

_____

_____

6. Why does the cooking time for each pancake remain about the same?

_____

_____

Words to know

ratio: a way to compare two amounts
ingredient: one of the foods that go into a recipe
scale: to make bigger or smaller by the same amount
batter: a runny mix of flour, milk, and eggs for cooking

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Thirty Guests and a Pancake Recipe for Six

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Thirty Guests and a Pancake Recipe for Six

Easier · 184 words · Flesch-Kincaid grade 2.4

1. Five times, because 30 divided by 6 is 5.
2. A way to compare two amounts.
3. 15 eggs.
4. The batter will be too thick or too thin.
5. The ratios stay the same, so the pancakes taste the same.
6. Each pancake is still the same size.

Triangle: Thirty Guests and a Pancake Recipe for Six

This passage · 211 words · Flesch-Kincaid grade 3.7

1. Five times, because 30 divided by 6 is 5.
2. A way to compare two amounts.
3. 15 eggs.
4. The batter will come out too thick or too thin.
5. It keeps the ratios the same, so the pancakes taste the same.
6. Each pancake is still the same size, even though there are more of them.

Square: Thirty Guests and a Pancake Recipe for Six

Harder · 223 words · Flesch-Kincaid grade 7

1. Five times, because 30 divided by 6 equals 5.
2. A way of comparing two amounts.
3. 15 eggs.
4. The batter would turn out far too thick or far too thin.
5. It keeps the ratios unchanged, so the pancakes taste the same as the original.
6. Every pancake is still the same size, even though there are more of them.