

## Calculator Choices Investigation One

Use your calculator to determine the denominator that the calculator will select for each problem. Write down the denominator only. When you see a pattern, stop using the calculator and try it on your own. Check with the calculator.

1)  $\frac{1}{4} - \frac{1}{4} =$  \_\_\_\_\_

2)  $\frac{1}{8} - \frac{1}{8} =$  \_\_\_\_\_

3)  $\frac{1}{6} - \frac{1}{6} =$  \_\_\_\_\_

4)  $\frac{1}{32} - \frac{1}{32} =$  \_\_\_\_\_

5)  $\frac{1}{9} - \frac{1}{9} =$  \_\_\_\_\_

6)  $\frac{1}{16} - \frac{1}{16} =$  \_\_\_\_\_

What do the denominators in each problem have in common?

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How do you think the denominator was selected by the calculator?

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Would the selection process be the same in other problems that are similar to the ones above? \_\_\_\_\_

If you are not sure, try a few on your own and record below.

## Calculator Choices - Subtraction Investigation Two

Use your calculator to determine the denominator that the calculator will select for each problem. Write down the denominator only. When you see a pattern, stop using the calculator and try it on your own. Check with the calculator.

1)  $\frac{1}{2} - \frac{1}{4}$  \_\_\_\_\_

2)  $\frac{1}{2} - \frac{1}{8}$  \_\_\_\_\_

3)  $\frac{3}{6} - \frac{1}{3}$  \_\_\_\_\_

4)  $\frac{4}{32} - \frac{1}{8}$  \_\_\_\_\_

5)  $\frac{4}{9} - \frac{1}{3}$  \_\_\_\_\_

6)  $\frac{1}{4} - \frac{1}{16}$  \_\_\_\_\_

What do the denominators in each problem have in common?

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How do you think the denominator was selected by the calculator?

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Would the selection process be the same in other problems that are similar to the ones above? \_\_\_\_\_

If you are not sure, try a few on your own and record below.

## Calculator Choices Investigation Three

Use your calculator to determine the denominator that the calculator will select for each problem. Write down the denominator only. When you see a pattern, stop using the calculator and try it on your own. Check with the calculator.

1)  $\frac{1}{4} - \frac{1}{6} = \underline{\hspace{2cm}}$

2)  $\frac{1}{5} - \frac{1}{8} = \underline{\hspace{2cm}}$

3)  $\frac{1}{6} - \frac{1}{9} = \underline{\hspace{2cm}}$

4)  $\frac{1}{8} - \frac{1}{10} = \underline{\hspace{2cm}}$

5)  $\frac{1}{3} - \frac{1}{4} = \underline{\hspace{2cm}}$

6)  $\frac{1}{5} - \frac{1}{7} = \underline{\hspace{2cm}}$

What do the denominators in each problem have in common?

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How do you think the denominator was selected by the calculator?

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Would the selection process be the same in other problems that are similar to the ones above? \_\_\_\_\_

If you are not sure, try a few on your own and record below.

## Calculator Choices Investigation Four

Look at the patterns and similarities in the first three investigations and determine a rule that works for each set of problems. From these three rules, find the one rule that explains and works for all of the problems.

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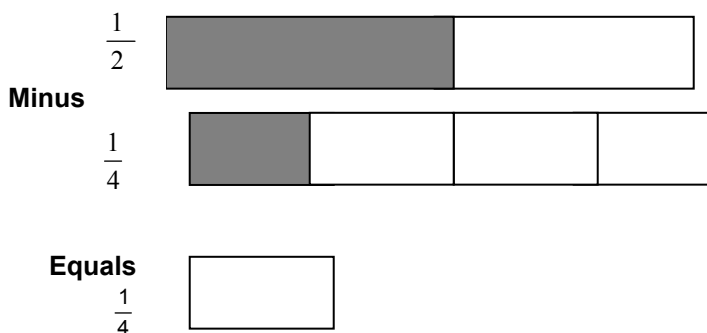
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### B5a Subtraction with Fraction Strips

Use the fraction strips to create a model for the subtraction equations given. The fraction strip represents one whole. It must be folded into the number of pieces that create the whole and then cut for the number of parts of the whole indicated in the fraction.

Paste your fraction strips down to represent the problem and then answer the questions at the bottom of the page for each equation.

Example Problem:  $\frac{1}{2} - \frac{1}{4} = \square$



For this problem  $\frac{1}{4}$  needs to be added to the  $\frac{1}{4}$  to equal  $\frac{1}{2}$ ; therefore the answer is  $\frac{1}{4}$ . The common denominator is 4 and the fraction  $\frac{1}{2}$  changes to the equivalent fraction  $\frac{2}{4}$ .

1)  $\frac{1}{2} - \frac{1}{4} = \underline{\quad}$

2)  $\frac{1}{2} - \frac{1}{8} = \underline{\quad}$

3)  $\frac{3}{6} - \frac{1}{3} = \underline{\quad}$

4)  $\frac{2}{8} - \frac{1}{4} = \underline{\quad}$

5)  $\frac{4}{9} - \frac{1}{3} = \underline{\quad}$

6)  $\frac{1}{4} - \frac{1}{16} = \underline{\quad}$

#### Questions:

- 1) For each problem, how much do you have to add to the number being subtracted (subtrahend) to equal the number it is subtracted from (minuend)?
- 2) What do the models represent? Hint: The models represent more than just the problem.

**B5b Fraction Strips**


**B6 Application Problems**

**Solve the following problems, showing all your work.**

<p>1) From a board <math>38\frac{1}{2}</math> inches long, Johnny cut a piece <math>17\frac{5}{8}</math> inches long. How long was the remaining piece?</p>	<p>5) Shirley bought a <math>\frac{1}{2}</math> pound of candy. On her way home she ate <math>\frac{3}{8}</math> pound. How much does Shirley have left?</p>
<p>2) Jackie weighed 165 pounds. When she was sick she lost <math>11\frac{3}{4}</math> pounds. How much did he weigh after this loss?</p>	<p>6) Bobby swam <math>2\frac{1}{2}</math> laps of his required 6 laps of the pool. How many more laps does Bobby need to swim to complete his requirement?</p>
<p>3) Before leaving on a weekend trip, Mr. Trip noticed that his mileage gauge registered <math>254\frac{3}{10}</math> miles. When he returned, his mileage gauge registered <math>734\frac{7}{10}</math> miles. How many miles did he drive that weekend?</p>	<p>7) From a 100 pound bag of cement, Rusaw used <math>74\frac{3}{8}</math> pounds to make concrete. How much cement was left in the bag?</p>
<p>4) Omah had a five-pound bag of flour. If she used <math>1\frac{1}{5}</math> pounds of flour for a certain recipe, how much flour did she have left?</p>	<p>8) Veronica weighed rocks for her science project. The weights of her rocks are as follows, <math>\frac{3}{8}, \frac{1}{4}, \frac{5}{8}, \frac{3}{16}</math>. What is the difference in the rock that weighed the most and the rock that weighed the least?</p>