

ST Math Activity Page: Teacher Guide

LOOK FOR students who draw a model to support their reasoning.



Before you calculate, can you tell if the result will be larger, smaller, or the same as the starting value?

LINEAR TRANSFORM

4

$\times \frac{1}{4}$

1

4

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

16

20

$\times \frac{1}{2}$

10

10

$\div \frac{2}{2}$

10

5

$\times \frac{2}{1}$

10

5

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

10

Which two operation machines do the same thing? Circle them.

Make your own machines that...

Possible answers:

Increase

3

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

6

Decrease

3

$\times \frac{1}{2}$

$1\frac{1}{2}$

Help me put these machines together!

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

$\times \frac{1}{3}$

$-\frac{1}{3}$

$+\frac{1}{3}$

12	$\div \frac{1}{2}$	36
12	$+\frac{1}{2}$	$\frac{37}{3}$
12	$-\frac{1}{2}$	$11\frac{2}{3}$
12	$\times \frac{1}{2}$	4

What is divided by $\frac{2}{2}$ the same as? How do you know?

What patterns do you notice about taking the same number in 4 different equations with 4 different operations?

Try this again with a different starting value (instead of 12). What patterns do you notice?

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