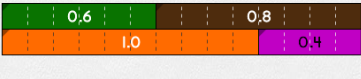


Fractions to Decimal Fractions


Understanding equivalence in the transition using
Cuisenaire Rods




OBJECTIVES/LEARNING TARGET(S)


- I can use visual models to show the relationship of fractions to the whole.
- I can use visual models to show equivalence and comparison in size and value of fractions using concrete and symbolic modeling.
- I can use visual models to show equivalence between the decimal and fraction form for a value using Cuisenaire rods.
- I can use modeling to add and subtract decimal fractions in the tenths using Cuisenaire rods.

Cuisenaire Rods



Always begin with...


Playtime



Activity 1

Can you show the relationship of $\frac{1}{2}$ to 1 whole?

1 whole = orange

1 = red

1 = brown

Can you show the relationship of $\frac{1}{3}$ to 1 whole?

1 whole = dark green

1 = Lt. green

1 whole = blue

Activity 2

The relationship of fractions to the whole and the concept of equivalence.

“One yellow plus one yellow equals two yellows”

$\frac{1}{2} + \frac{1}{2} = \frac{2}{2} = 1$

How many halves (2 yellow one-half rods)

$\frac{1}{2} + \frac{1}{2} = 1$ (one whole)

$\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = 1$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$

Activity 3

Increased understanding of equivalence using addition of fractions

$\frac{1}{2} + \frac{1}{2}$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

$\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{8}$

Activity 4

0.10

Transition to Decimals

How you say it is how you write it!

$\frac{?}{10}$ $0.1 + 0.1 + 0.1 + 0.1 = 0.4$
 $0.10 + 0.10 + 0.10 + 0.10 = 0.40$

$\frac{6}{10}$ $0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 = 0.6$
 $0.10 + 0.10 + 0.10 + 0.10 + 0.10 + 0.10 = 0.60$

$\frac{5}{10}$ $\frac{1}{2}$

Activity 5

$\frac{5}{10}$ $0.1 + 0.1 + 0.1 + 0.1 + 0.1 = 0.5$
 $0.10 + 0.10 + 0.10 + 0.10 + 0.10 = 0.50$

So $\frac{5}{10}$ is the same as **.5 AND .50 AND $\frac{1}{2}$!**

$\frac{?}{10}$

Activity 6

The three slides on this page resemble the changes in the video, so you can watch without making notes.

When you see the notice to pause the video, use these slides to help you practice the explanation you might use with a student.

$\frac{2}{10}$ $0.1 + 0.1 = 0.2$ $\frac{1}{?}$
 $0.10 + 0.10 = 0.20$

$\frac{2}{10}$ $0.1 + 0.1 = 0.2$ $\frac{1}{5}$
 $0.10 + 0.10 = 0.20$

Pause and share talking points about this movement of fractions and decimals.

$\frac{?}{10}$ $\frac{10}{10} + \frac{4}{10} = 1\frac{4}{10}$

$0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 = 1.0$

$0.1 + 0.1 + 0.1 + 0.1 = 0.4$

With the orange rod as 1 whole, or 1.0, the rest of the rods become relational and have determined values to work with.

Compare decimal fractions using rods

Addition of decimal fractions using rods

Subtraction of decimal fractions using rods

Pause Video-Restart When Ready

Open the website or get paper Cuisenaire Rods to model addition and subtraction along with the presentation.

<https://oame.on.ca/CLIPS/swfPlayer.html?swfURL=tools/RelationalRods1.swf&title=Relational%20Rods+>

Relational Rods+

mathies Learning Tools

<http://oame.on.ca/CLIPS/swfPlayer.html?swfURL=tools/RelationalRods1.swf&title=Relational%20Rods+>

Fun with rods

0.6 0.5 0.9

Relational Rods+

Decimal Relational Rods
created by
mathies.ca <<http://mathies.ca>>.
Relational Rod activity used
with permission.

$$\frac{1}{2} + \frac{1}{2}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{4}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

$$10 + 10 + 10 + 10 + 10 + 10 = 60$$

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