

3-Multiplying with Models

Friday, October 11, 2019 12:44 PM

Name _____

Ma8

I CAN IDENTIFY AND MODEL THE MULTIPLICATION OF FRACTIONS

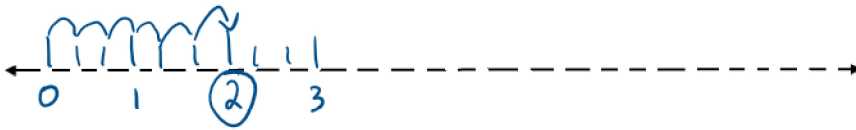
1. $\frac{1}{3} \times 6 = ?$

* simplify *

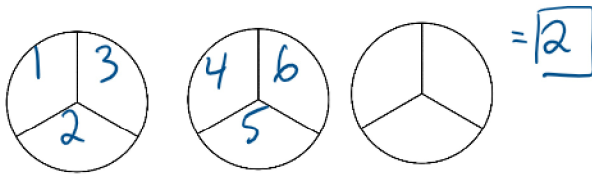
a. Repeated addition:

$$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{6}{3} = \boxed{2}$$

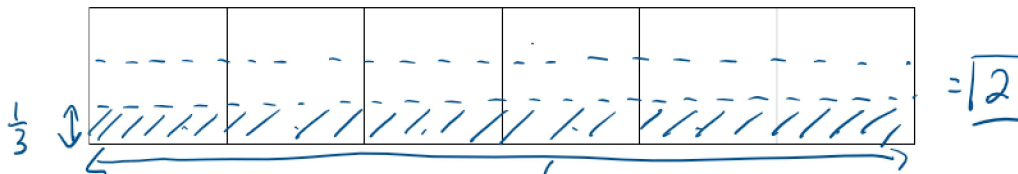
b. Using a number line: 6 jumps of $\frac{1}{3}$



c. Using fraction circles: Shade $\frac{1}{3}$, 6 times

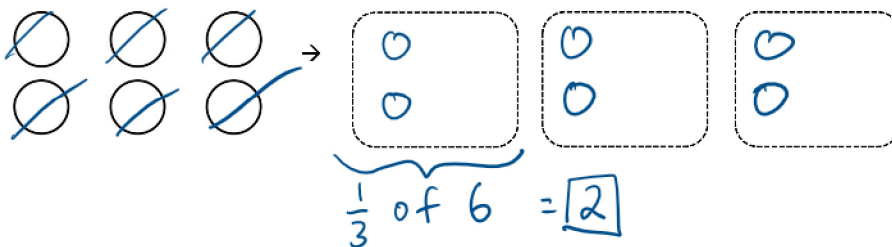


d. Calculate the area of a rectangle with dimensions $\frac{1}{3}$ by 6



e. Replace the multiplication sign with the word 'of':

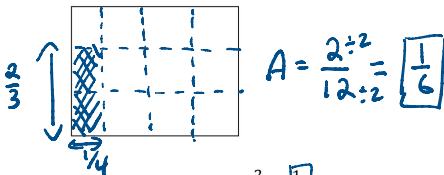
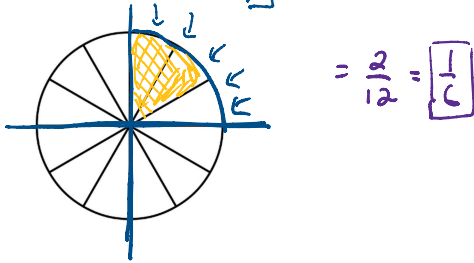
• What is $\frac{1}{3}$ of 6?



f. Short cut:

- Look to see if you can reduce the first
- Multiply the numerators and then multiply the denominators
- Look to see if you can reduce

$$1 \left(\frac{1}{3} \right) \left(\frac{6}{1} \right) = \frac{2}{1} = \boxed{2}$$

2. $\frac{2}{3} \times \frac{1}{4} =$ what is $\frac{2}{3}$ of $\frac{1}{4}$?a. Rectangle area: Find $\frac{2}{3}$ of $\frac{1}{4}$ b. Fraction circle: Find $\frac{2}{3}$ of $\frac{1}{4}$ 

c. Short cut:

- Look to see if you can reduce first
- Multiply the numerators and then multiply the denominators
- Look to see if you can reduce

$$\left(\frac{2}{3} \right) \left(\frac{1}{4} \right) = \boxed{\frac{1}{6}}$$

Name _____

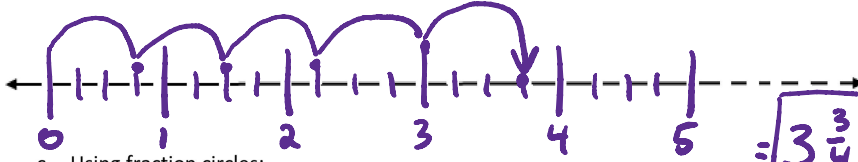
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3. $\frac{3}{4} \times 5 = ?$

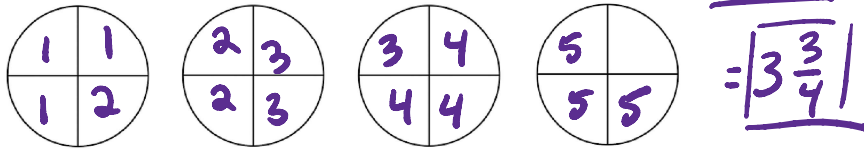
a. Repeated addition:

$$\frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4} = \frac{15}{4} = 3\frac{3}{4}$$

b. Using a number line:



c. Using fraction circles:



d. Calculate the area of a rectangle:



e. Replace the multiplication sign with the word 'of':

• What is $\frac{3}{5}$ of 5?



f. Short cut:

- Look to see if you can reduce first
- Multiply the numerators and then multiply the denominators
- Look to see if you can reduce

Finish next time

Name _____

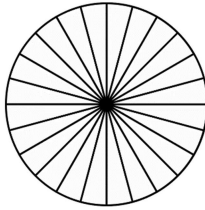
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4. $\frac{3}{4} \times \frac{5}{6} =$ what is $\frac{3}{4}$ of $\frac{5}{6}$?

a. Rectangle area:



b. Fraction circle:



c. Short cut:

- Look to see if you can reduce first
- Multiply the numerators and then multiply the denominators
- Look to see if you can reduce

Quiz Friday + / - fractions.

Assignment Due Wed.

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6. Multiply and simplify:

a) $\frac{3}{1} \times \frac{2}{1} = \frac{6}{1} = \boxed{6}$

b) $\frac{2}{5} \times \frac{3}{1} = \frac{6}{5}$

c) $\frac{7}{121} \times \frac{11}{49}$

d) $\frac{12}{15} \cdot \frac{7}{8}$

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Assignment Due Wed.

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6. Multiply and simplify.

a) $\frac{3}{7} \times \frac{14}{1} = \frac{6}{1} = \boxed{6}$ _____

b) $\frac{2}{5} \cdot \frac{3}{7} = \boxed{\frac{6}{5}}$ _____

c) $\frac{7}{121} \times \frac{11}{49}$ _____

d) $\frac{12}{15} \cdot \frac{7}{8}$ _____

e) $\frac{21}{35} \times \frac{5}{9}$ _____

f) $\frac{49}{25} \cdot \frac{125}{7}$ _____

g) $\frac{121}{143} \times \frac{13}{17}$ _____

h) $\frac{57}{69} \cdot \frac{23}{9}$ _____

i) $\frac{51}{26} \times \frac{77}{55}$ _____

j) $\frac{7}{2} \cdot \frac{8}{5} \cdot \frac{25}{35}$ _____

k) $\frac{3}{5} \times \frac{25}{18} \times \frac{6}{11}$ _____

l) $\frac{5}{7} \cdot \frac{15}{8} \cdot \frac{14}{25}$ _____