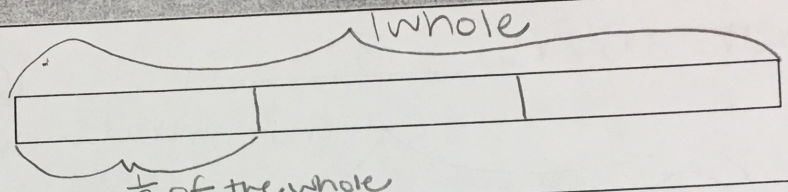
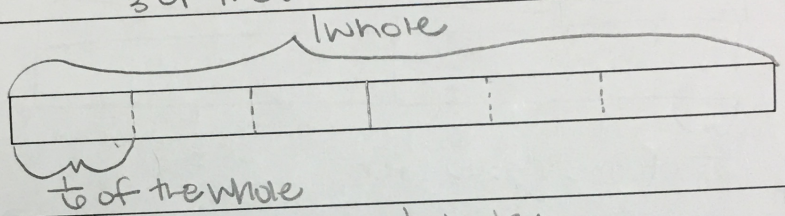
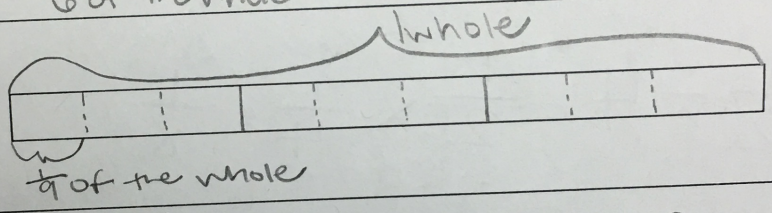
Fraction ÷ Whole Number

M4 L26

expression	diagram
$1 \div 3 = \frac{1}{3}$ $1 \times \frac{1}{3} = \frac{1}{3}$	
$\frac{1}{2} \div 3 = \frac{1}{6}$ $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$	
$\frac{1}{3} \div 3 = \frac{1}{9}$ $\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$	

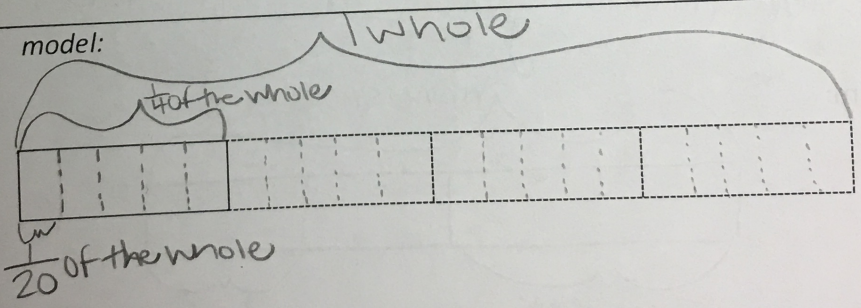
What pattern do you notice in the expressions?

The divisor is the same but as the value of the dividend decreases, so does the value of the quotient.

$\frac{1}{4} \div 5 = \frac{1}{20}$

If you have 1-fourth of "something" and divide it into 5 equal parts, how much of the whole "something" would each part be?

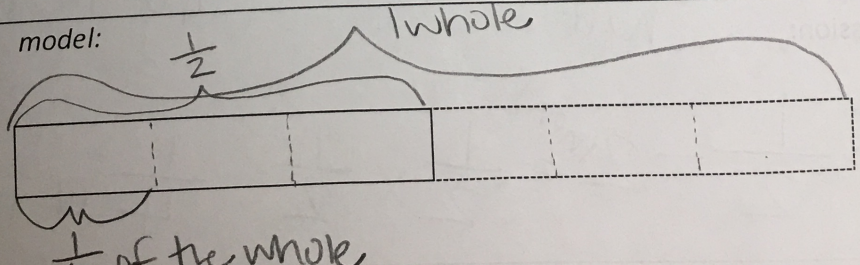
model:



$\frac{1}{2} \div 3 = \frac{1}{6}$

If you have 1-half of "something" and divide it into 3 equal parts, how much of the whole "something" would each part be?

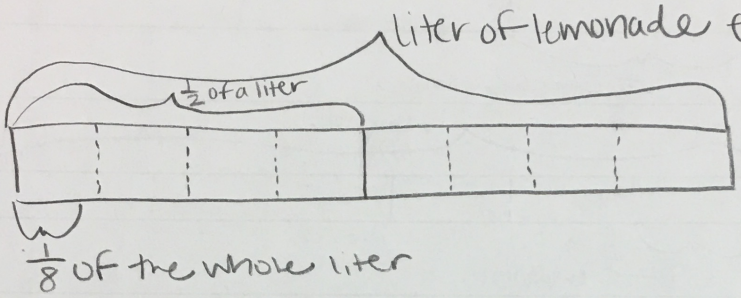
model:



If Sarah poured one-half liter of lemonade equally into 4 bottles, how many liters of lemonade are in each bottle?

TS: Sarah pours $\frac{1}{8}$ of the lemonade in liter of lemonade each bottle.

diagram:



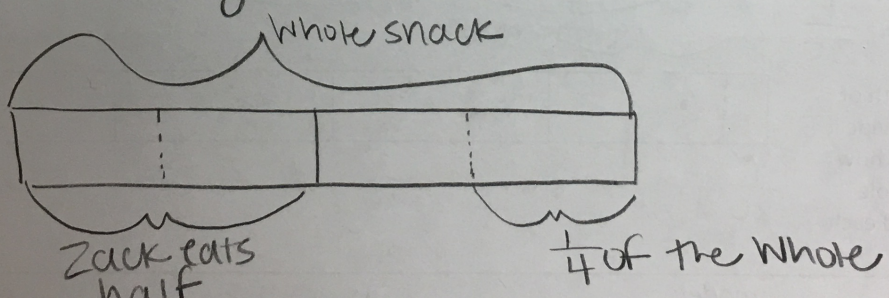
expression:

$$\frac{1}{2} \div 4 = \frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$$

Zack eats half of his snack and gives the other half to his two best friends for them to share equally. What portion of the whole snack does each friend get?

TS: Each friend gets $\frac{1}{4}$ of the whole snack.

diagram:



expression:

$$\frac{1}{2} \div 2 \text{ friends} = \frac{1}{2} \times \frac{1}{2} = \frac{1}{4} \text{ of the whole}$$