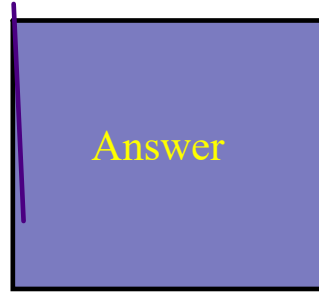
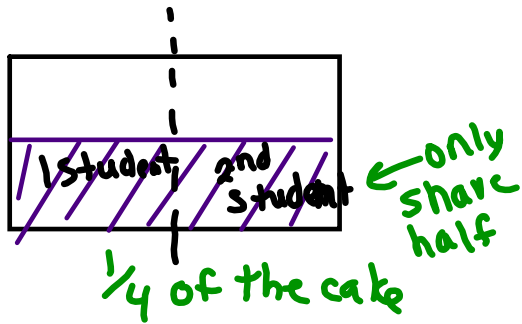


Dividing a Fraction by a Whole Number

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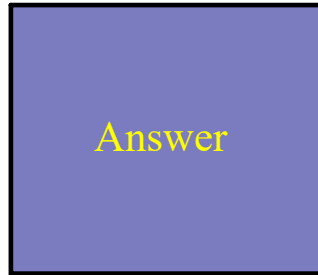
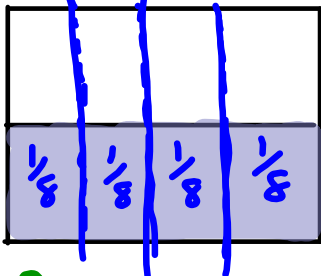
1. What fraction of a whole cake would each person get if half a cake is shared equally among :

- (a) 2 students (b) 4 students (c) 8 students (d) 3 students (e) 6 students



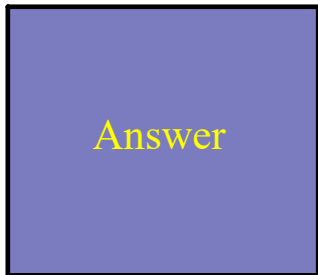
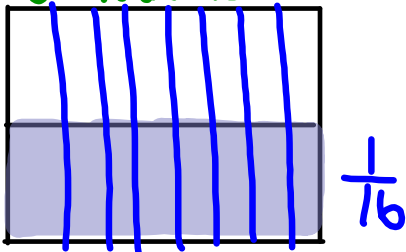
$$\frac{1}{2} \div 2 = \frac{1}{4}$$

b) 4 students



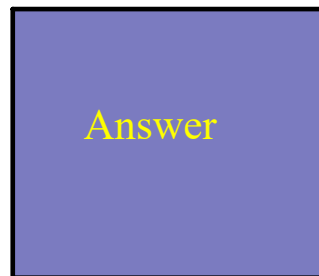
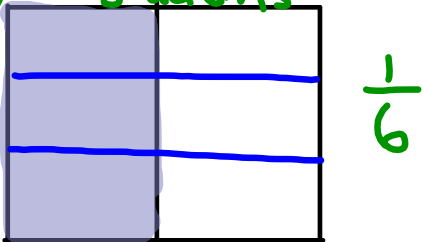
$$\frac{1}{2} \div \frac{4}{1} = \frac{1}{8}$$

c) 8 students



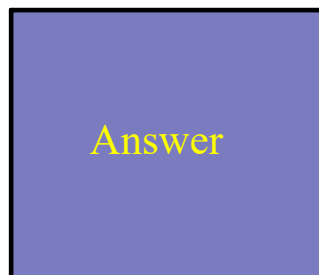
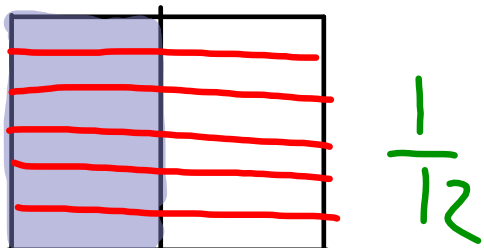
$$\frac{1}{2} \div 8 = \frac{1}{16}$$

d) 3 students



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

e) 6 students



$$\frac{1}{2} \div 6 = \frac{1}{12}$$

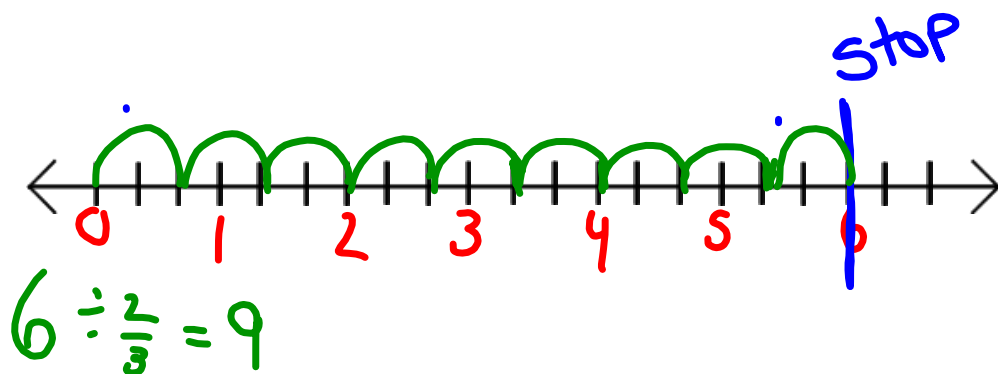
Using number lines to model

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

step 1) Draw a number line and count by the unit fraction of $\frac{1}{3}$ up until 6

step 2) Do leaps of $\frac{2}{3}$

step 3) Count the leaps

I did 9 full jumps of $\frac{2}{3}$ 

$$6 \div \frac{2}{3} = 9$$

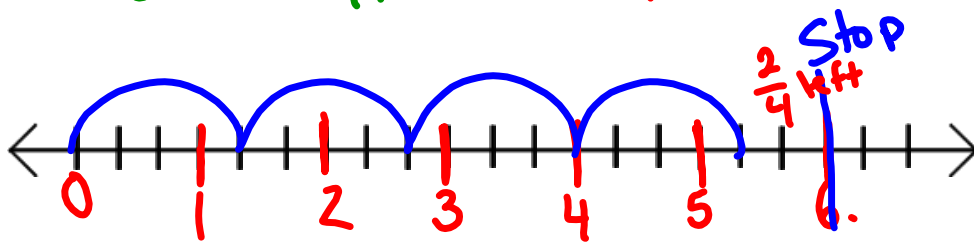
Using number lines to model

$6 \div \frac{4}{3}$ step 1) Draw a number line and count by the unit fraction of $\frac{1}{3}$ up until 6

step 2) Do leaps of $\frac{4}{3}$

step 3) Count the leaps (Count full jumps \rightarrow Remainder)

b) $6 \div \frac{4}{3} = 4\frac{1}{2}$ 4 full jumps $\frac{2}{4} = \frac{1}{2}$ left



but $\frac{2}{4}$ is half of $\frac{4}{4}$
 $\frac{2}{4}$ $\frac{4}{4}$

so only $\frac{1}{2}$ a jump
 $\frac{1}{2}$

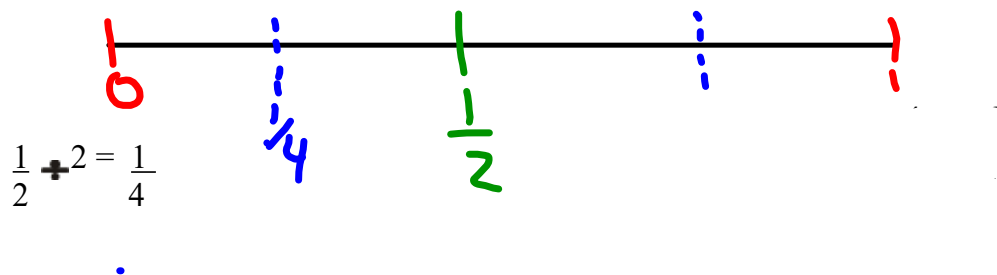
You can also use a number line to show dividing a fraction by a whole number.

step 1) Mark 0 and $\frac{1}{2}$ on the number line

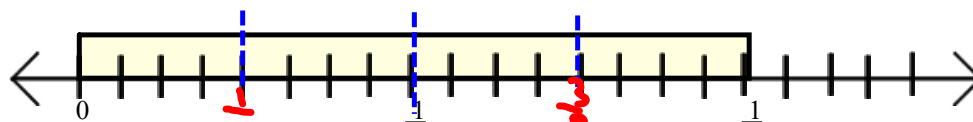
$$\frac{1}{2} \div 2$$

step 2) Divide into 2 equal place

Think what the whole would be now



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



The number line is not as clear to most students when doing division as with some of the other operations.