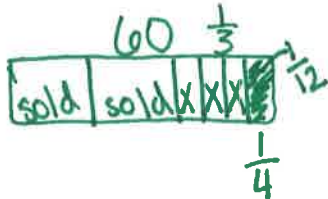Name _____   Date _____

Solve and show your thinking with a tape diagram.

1. Mrs. Onusko made 60 cookies for a bake sale. She sold $\frac{2}{3}$ of them and gave $\frac{3}{4}$ of the remaining cookies to the students working at the sale. How many cookies did she have left?
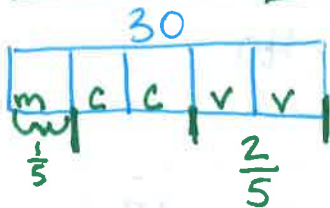
Mrs. O had __5__ cookies left

$$\frac{1}{4} \text{ of } \frac{1}{3} = \frac{1 \times 1}{4 \times 3} = \frac{1}{12}$$

$$\frac{1}{12} \text{ of } 60 = \frac{1 \times 60}{12\,1}^{5} = \frac{5}{1} = 5$$

2. Joakim is icing 30 cupcakes. He spreads mint icing on $\frac{1}{5}$ of the cupcakes and chocolate on $\frac{1}{2}$ of the remaining cupcakes. The rest will get vanilla icing. How many cupcakes have vanilla icing?
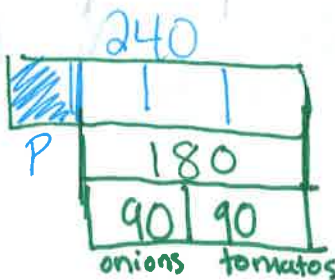
$$\frac{2}{5} \text{ of } 30 = \frac{2 \times 30}{5\,1}^{6} = \frac{12}{1} = 12$$

12 cupcakes have vanilla icing.

3. The Booster Club sells 240 cheeseburgers. $\frac{1}{4}$ of the cheeseburgers had pickles, $\frac{1}{2}$ of the remaining burgers had onions, and the rest had tomato. How many cheeseburgers had tomato?
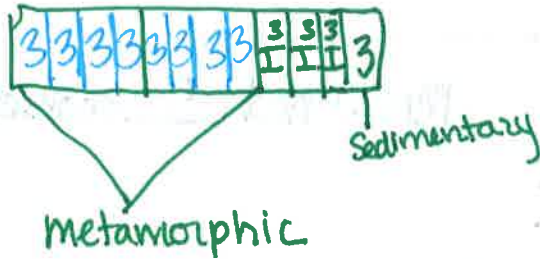
__90__ cheeseburgers had tomatos

$$\frac{3}{4} \text{ of } 240 = \frac{3 \times 240}{4\,1}^{60} = \frac{180}{1}$$

$$\frac{1}{2} \text{ of } 180 = \frac{180}{2} = 90$$

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4. DeSean is sorting his rock collection. $\frac{2}{3}$ of the rocks are metamorphic, and $\frac{3}{4}$ of the remainder are igneous rocks. If the 3 rocks left over are sedimentary, how many rocks does DeSean have?

DeSean has __36__ rocks.

$3 \times 12 = 36$

5. Milan puts $\frac{1}{4}$ of her lawn-mowing money in savings and uses $\frac{1}{2}$ of the remaining money to pay back her sister. If she has $15 left, how much did she have at first?
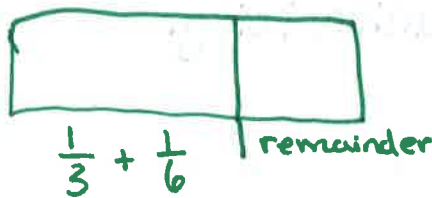
Milan has __$40__ at first.

$15 + 15 = 30$

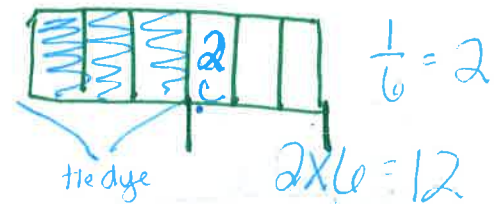$\frac{1}{3}$ of $30 = \frac{30}{3} = 10$

$4 \times 10 = 40$

6. Parks is wearing several rubber bracelets. $\frac{1}{3}$ of the bracelets are tie-dye, $\frac{1}{6}$ are blue, and $\frac{1}{3}$ of the remainder are camouflage. If Parks wears 2 camouflage bracelets, how many bracelets does he have on?

$\frac{1}{3} + \frac{1}{6}$

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

Parks has __12__ bracelets.

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

$2 \times 6 = 12$

7. Ahmed spent $\frac{1}{3}$ of his money on a burrito and a water bottle. The burrito cost 2 times as much as the water. The burrito cost $4. How much money does Ahmed have left?

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