

Solve each problem using **calculation** *and* **draw a model** to show your thinking.

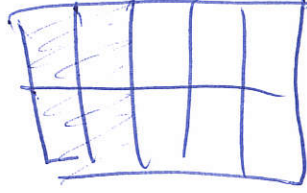
1. $\frac{2}{5} + \frac{1}{2}$

$$\frac{2}{5} \times \frac{2}{2} = \frac{4}{10}$$

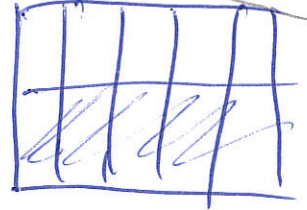
$$+ \frac{1}{2} \times \frac{5}{5} = \frac{5}{10}$$

$$= \frac{9}{10}$$

The models show the equivalent fractions w/ same denominators



$$\frac{2}{5} = \frac{4}{10}$$



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

2. $1 \frac{4}{5} - \frac{2}{3}$

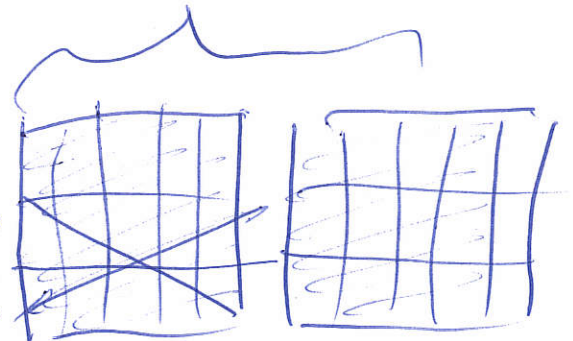
$$\frac{9}{5} \times \frac{3}{3} = \frac{27}{15}$$

$$- \frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$$

$$= \frac{17}{15}$$

$$= 1 \frac{2}{15}$$

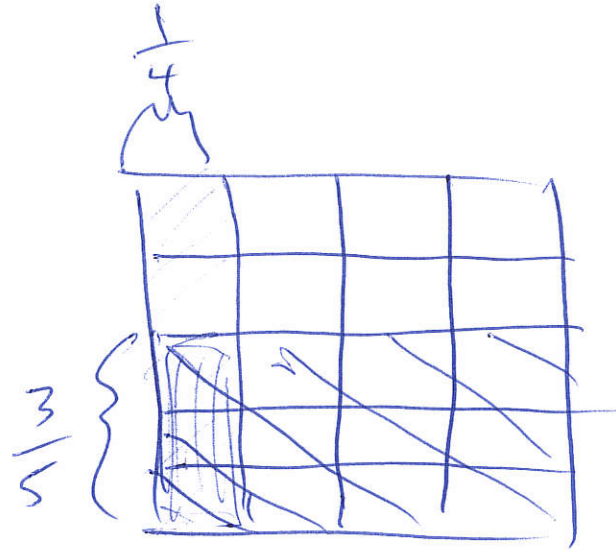
$$1 \frac{4}{5} = \frac{27}{15}$$



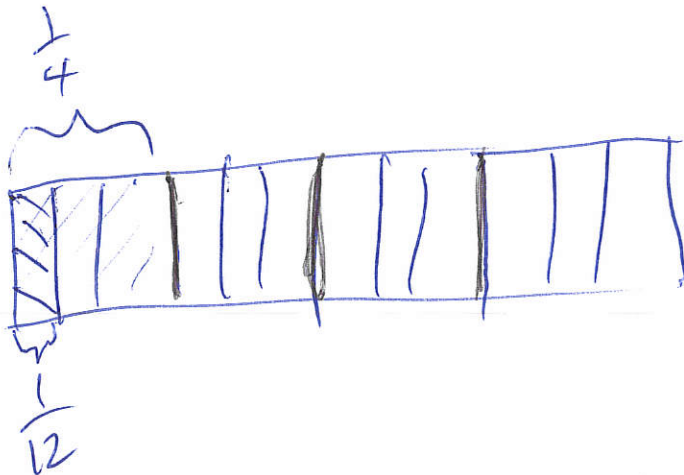
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3. $\frac{1}{4} \times \frac{3}{5}$

$\frac{1}{4} \times \frac{3}{5} = \frac{3}{20}$
"of"



4. $\frac{1}{4} \div 3 = \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$



Solve each problem – answers should be in simplest form and includes words.

5. David raced two snails for ¹⁰ minutes each. The first snail traveled $2\frac{1}{3}$ inches and the second snail traveled $1\frac{1}{2}$ inches. How much further did the first snail travel than the second snail?

$$\begin{array}{r} 2\frac{1}{3} \times \frac{2}{2} = 2\frac{2}{6} \quad \frac{14}{6} \\ - 1\frac{1}{2} \times \frac{3}{3} = 1\frac{3}{6} \quad - \frac{9}{6} \\ \hline \left(\frac{5}{6}\right) \text{ of an inch further} \end{array}$$

"How much further"
asking for the difference
(subtraction)

6. Sal bought $1\frac{3}{4}$ pound of cheese and used $\frac{2}{3}$ of the cheese to make a cassarole. How much cheese did he use?

$$\frac{2}{3} \text{ of } 1\frac{3}{4} \quad \text{He used}$$

$$1\frac{3}{4} \times \frac{2}{2} = \frac{7}{4} = 1\frac{1}{2} \text{ pounds}$$

$\frac{2}{3} \times 1\frac{3}{4}$
↑
change to improper first

7. Terry practiced the guitar $\frac{2}{3}$ hour on Monday and $\frac{3}{4}$ hour on Tuesday. What fraction of an hour did she practice in all? total (addition)

$$\begin{array}{r} \frac{2}{3} \times \frac{4}{4} = \frac{8}{12} \\ + \frac{3}{4} \times \frac{3}{3} = \frac{9}{12} \\ \hline = \frac{17}{12} = 1\frac{5}{12} \text{ hours} \end{array}$$

She practiced

9. If a dog eats $\frac{1}{4}$ pound of food each day, how many days will it take for the dog to eat a 5-pound bag?

$$5 \text{ pounds} \div \frac{1}{4} = 20 \text{ days}$$

groups eaten each day

10. Mrs. Williams uses the following recipe for rice crispy treats.

- 2 cups melted butter
- 24 ounces of marshmallows
- 13 cups of rice crispy cereal

How much of each ingredient will she need if she only makes $\frac{2}{3}$ of this recipe?

$$\frac{2}{3} \times 2 = \frac{4}{3} = 1\frac{1}{3} \text{ melted butter}$$

$$\frac{2}{3} \times 24 = \frac{48}{3} = 16 \text{ oz marshmallows}$$

$$\frac{2}{3} \times 13 = \frac{26}{3} = 8\frac{2}{3} \text{ cups R.C.}$$

11. When the rice crispy treats cool, Mrs. Williams cuts them into 30 equal pieces. She gives two-fifths of the treats to her son and takes the rest to school. How many treats will Mrs. Williams take to school?

$$\frac{2}{5} \times 30 = \frac{60}{5} = 12 \text{ person}$$

18 to school

