White Rose Maths

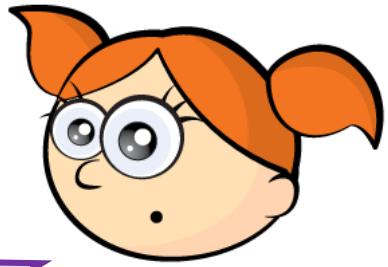
Year 4 - Spring - Block 3

Fractions

Always, Sometimes, Never?

Alex says,

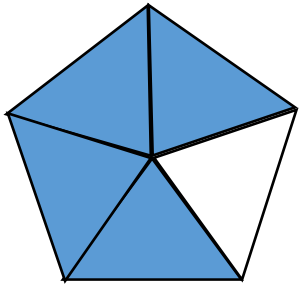
If I split a shape into 4 parts, I have split it into quarters.

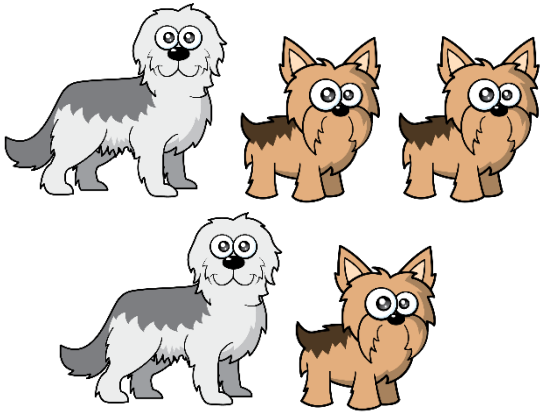


Explain your answer.

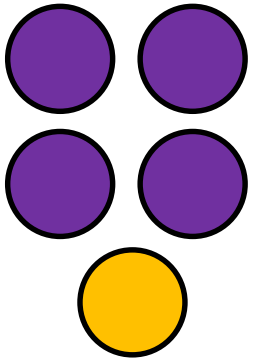
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Which representations of $\frac{4}{5}$ are incorrect?





$\frac{4}{5}$

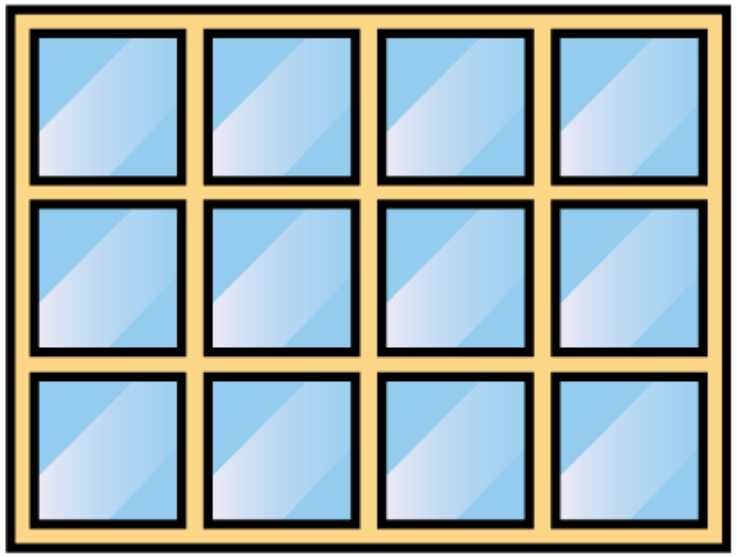




Explain how you know.

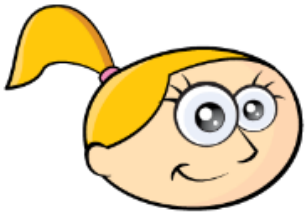
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How many equivalent fractions can you see in this picture?



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Eva says,



I know that $\frac{3}{4}$ is equivalent to $\frac{3}{8}$ because the numerators are the same.

Is Eva correct?

Explain why.

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Ron has two strips of the same sized paper.
He folds the strips into different sized fractions.
He shades in three equal parts on one strip and six equal parts on the other strip.

The shaded areas are equal.

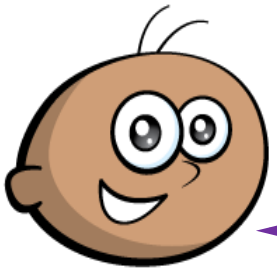
What fractions could he have folded his strips into?

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Tommy is finding equivalent fractions.

$$\frac{3}{4} = \frac{5}{6} = \frac{7}{8} = \frac{9}{10}$$

He says,

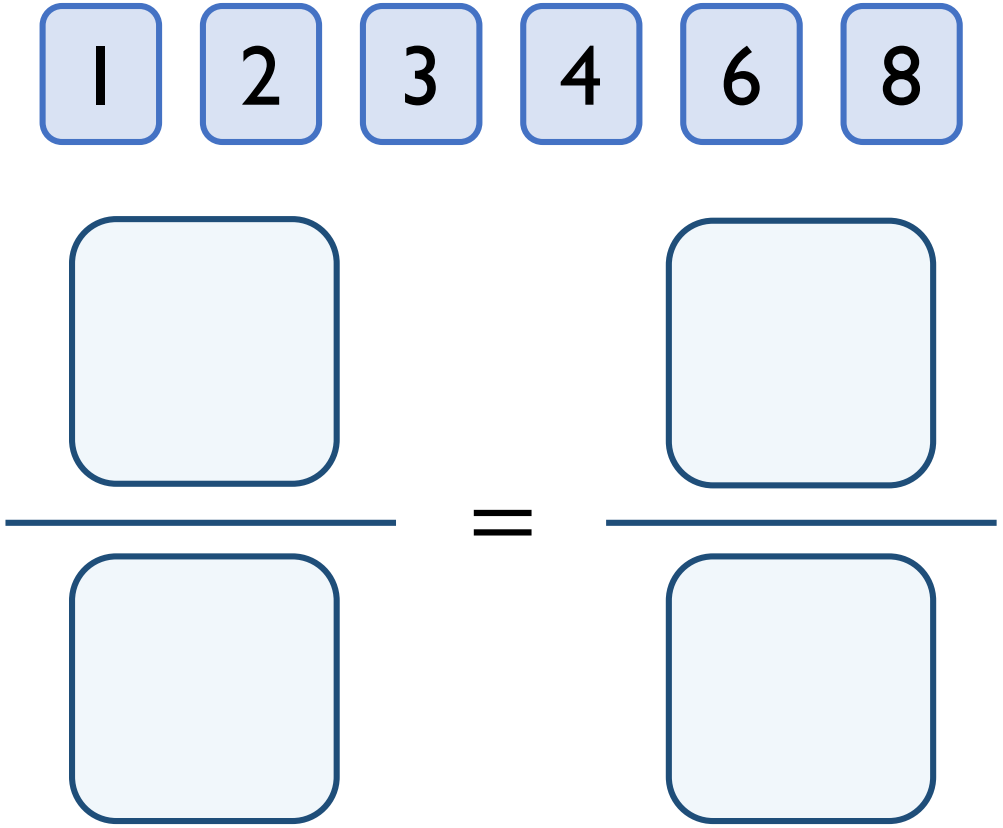


I did the same thing to the numerator and the denominator so my fractions are equivalent.

Do you agree with Tommy?
Explain your answer.

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Use the digit cards to complete the equivalent fractions.



How many different ways can you find?

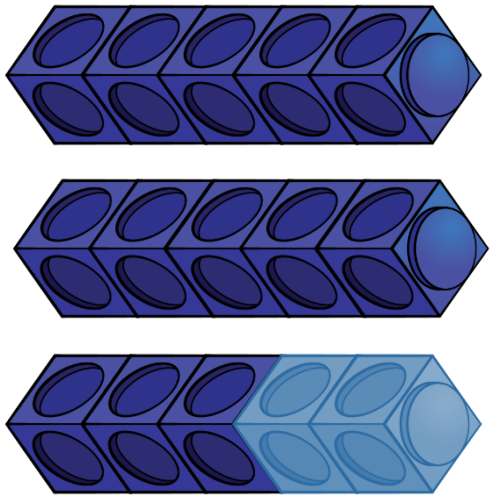
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3 friends share some pizzas.
Each pizza is cut into 8 equal slices.
Altogether, they eat 25 slices.

How many whole pizzas do they eat?

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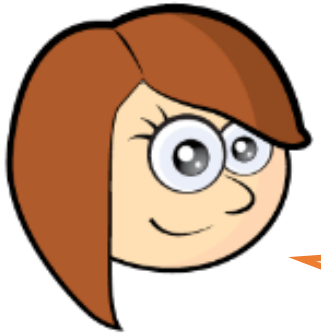
Spot the mistake.



$\frac{13}{5}$ = 10 wholes and 3 fifths

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Rosie says,



$\frac{16}{4}$ is greater than $\frac{8}{2}$ because 16 is greater than 8

Do you agree?

Explain why.

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Here is a number sequence.

$\frac{5}{12}, \frac{7}{12}, \frac{10}{12}, \frac{14}{12}, \frac{19}{12}, ____$

Which fraction would come next?

Can you write the fraction in more than one way?

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Circle and correct the mistakes in the sequences.

$\frac{5}{12}, \frac{8}{12}, \frac{11}{12}, \frac{15}{12}, \frac{17}{12}$

$\frac{9}{10}, \frac{7}{10}, \frac{6}{10}, \frac{3}{10}, \frac{1}{10}$

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Play the fraction game for four players. Place the four fraction cards on the floor. Each player stands in front of a fraction. We are going to count up in tenths starting at 0. When you say a fraction, place your foot on your fraction.

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

$\frac{3}{10}$ $\frac{5}{10}$

How can we make 4 tenths?

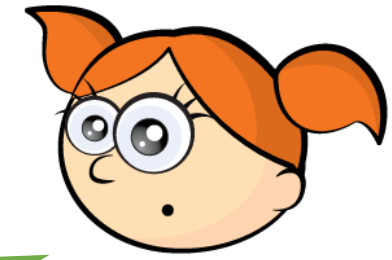
What is the highest fraction we can count to?

How about if we used two feet?

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Alex is adding fractions.

$$\frac{3}{9} + \frac{2}{9} = \frac{5}{18}$$



Is she correct?

Explain why.

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How many different ways can you find to solve the calculation?

$$\frac{\square}{\square} + \frac{\square}{\square} = \frac{11}{9}$$

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Mo and Teddy are solving:

$$\frac{6}{13} + \frac{5}{13} + \frac{7}{13}$$

Mo



The answer is 1 and $\frac{5}{13}$

The answer is $\frac{18}{13}$



Teddy

Who do you agree with?
Explain why.

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Match the number stories to the correct calculations.

Teddy eats $\frac{7}{8}$ of a pizza. Dora eats $\frac{4}{8}$ How much do they eat altogether?	$\frac{7}{8} + \frac{3}{8} = -$
Teddy eats $\frac{7}{8}$ of a pizza. Dora eats $\frac{4}{8}$ less. How much do they eat altogether?	$\frac{7}{8} + \frac{4}{8} = -$
Teddy eats $\frac{7}{8}$ of a pizza. Dora eats $\frac{3}{8}$ less. How much does Dora eat?	$\frac{7}{8} - \frac{3}{8} = -$

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How many different ways can you find to solve the calculation?

$$\frac{\square}{7} - \frac{3}{7} = \frac{\square}{7} + \frac{\square}{7}$$

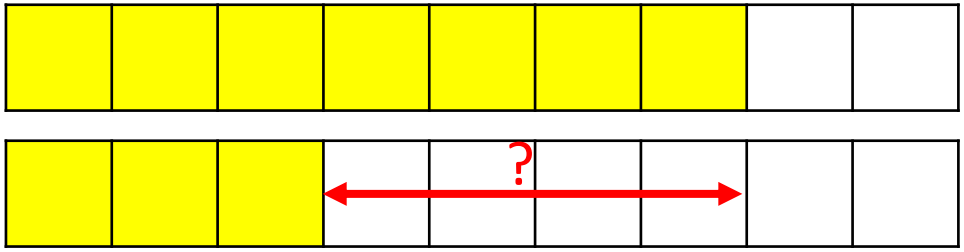
$$\frac{\square}{7} - \frac{3}{7} = \frac{\square}{7} - \frac{\square}{7}$$

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Annie and Amir are working out the answer to this problem.

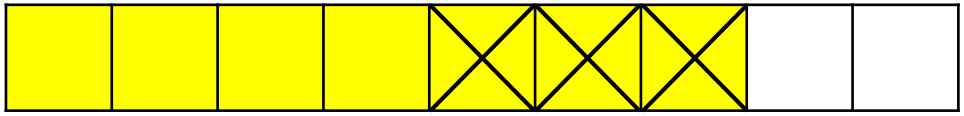
$$\frac{7}{9} - \frac{3}{9}$$

Annie uses this model.





Amir uses this model.





Which model is correct? Explain why.

Can you write a number story for each model?

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Dora is subtracting a fraction from a whole.

$$5 - \frac{3}{7} = \frac{2}{7}$$



Can you spot her mistake?

What should the answer be?

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How many ways can you make the statement correct?

$$2 - \frac{\square}{8} = \frac{5}{8} + \frac{\square}{8}$$

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Whitney has a piece of ribbon that is 3 metres long.

She cuts it into 12 equal pieces and gives Teddy 3 pieces.

How many metres of ribbon does Whitney have left?

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True or False?

To find $\frac{3}{8}$ of a number, divide by 3 and multiply by 8



Convince me.

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Ron gives $\frac{2}{9}$ of a bag of 54 marbles to Alex.

Teddy gives $\frac{3}{4}$ of a bag of marbles to Alex.

Ron gives Alex more marbles than Teddy.

How many marbles could Teddy have to begin with?

$$\frac{2}{9} \text{ of } 54 > \frac{3}{4} \text{ of } \square$$

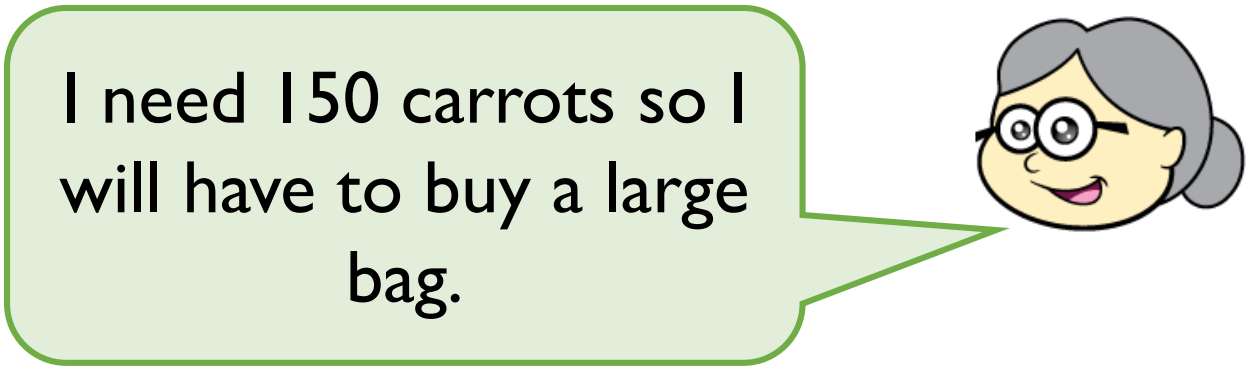
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The school kitchen needs to buy carrots for lunch.

A large bag has 200 carrots and a medium bag has $\frac{3}{5}$ of a large bag.

Mrs Rose says,

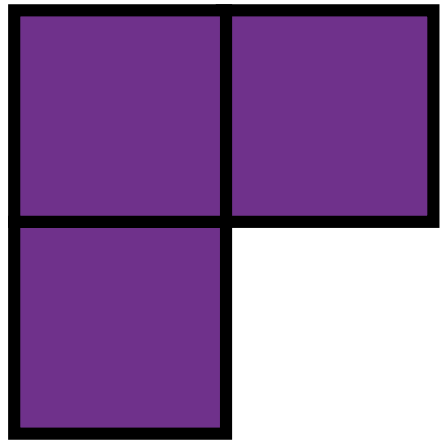


Is Mrs Rose correct?

Explain your reasoning.

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These three squares are $\frac{1}{4}$ of a whole shape.



How many different shapes can you draw that could be the complete shape?

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If $\frac{1}{8}$ of A $=$ 12, find the value of A, B and C.

$$\frac{5}{8} \text{ of A} = \frac{3}{4} \text{ of B} = \frac{1}{6} \text{ of C}$$

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