Area (Monday)

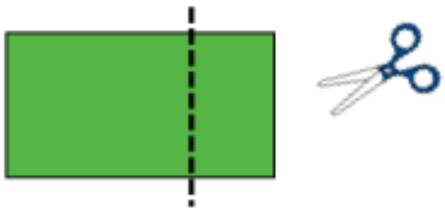
Investigate how many ways you can make different squares and rectangles with the same area of 84 cm^2

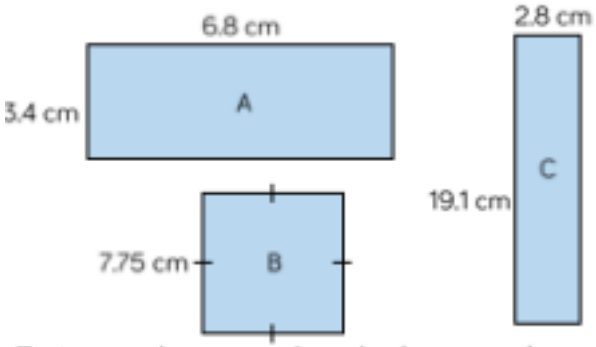
What strategy did you use?

True or False?

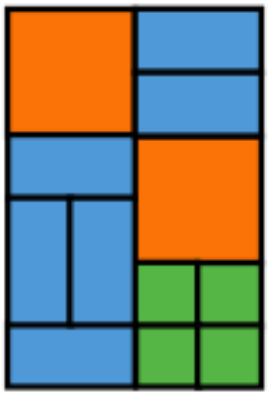
If you cut off a piece from a shape, you reduce its area and perimeter.

Draw 2 examples to prove your thinking.





Estimate the area of each shape and then order from largest to smallest.



Each orange square has an area of 24 cm^2.

Calculate the total orange area.

Calculate the blue area.

Calculate the green area.

What is the total area of the whole shape?

Area ANSWERS (Monday)

Investigate how many ways you can make different squares and rectangles with the same area of 84 cm^2

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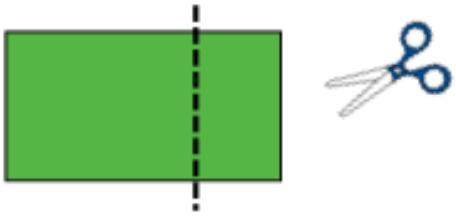
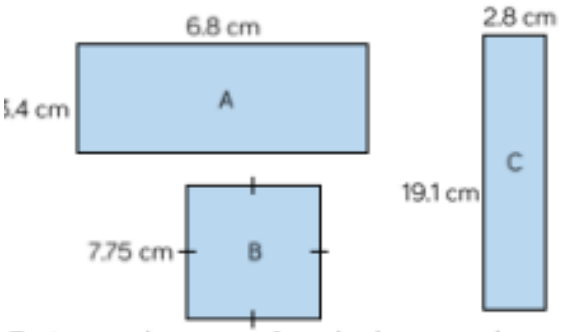


True



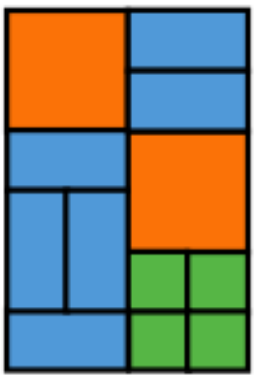
Estimate the area of each shape and then order from largest to smallest.

Answer: A = 3cm × 7cm = 21cm^2

B = 8cm × 8cm = 64cm

C = 3cm × 19cm = 57cm^2

Order: B, C, A



Each orange square has an area of 24 cm^2.

Calculate the total orange area.

Calculate the blue area.

Calculate the green area.

What is the total area of the whole shape?

Answer:

Orange = 48 cm^2

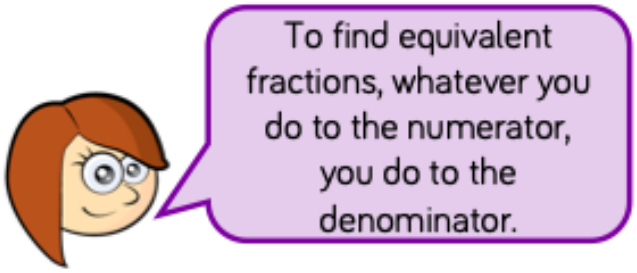
Blue = 72 cm^2

Green = 24 cm^2

Total = 144 cm^2

Equivalent Fractions (Tuesday)

Rosie says,



Using her method, here are the equivalent fractions Rosie has found for $\frac{4}{8}$

$\frac{4}{8} = \frac{8}{16}$ $\quad$ $\frac{4}{8} = \frac{6}{10}$

$\frac{4}{8} = \frac{2}{4}$ $\quad$ $\frac{4}{8} = \frac{1}{5}$

Are all Rosie's fractions equivalent?
Does Rosie's method work?
Explain your reasons.

Ron thinks you can only simplify even numbered fractions because you keep on halving the numerator and denominator until you get an odd number.

Do you agree?
Explain your answer.

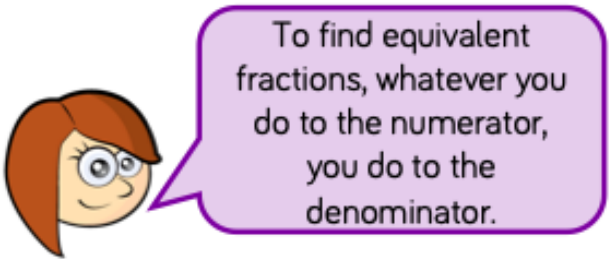
Here are some fraction cards.
All of the fractions are equivalent.

$\frac{4}{A}$ $\quad$ $\frac{B}{C}$ $\quad$ $\frac{20}{50}$

$A + B = 16$
Calculate the value of C.

Equivalent Fractions ANSWERS (Tuesday)

Rosie says,



Using her method, here are the equivalent fractions Rosie has found for $\frac{4}{8}$

$\frac{4}{8} = \frac{8}{16}$ $\frac{4}{8} = \frac{6}{10}$

$\frac{4}{8} = \frac{2}{4}$ $\frac{4}{8} = \frac{1}{5}$

Are all Rosie's fractions equivalent?
Does Rosie's method work?
Explain your reasons.

$\frac{4}{8} = \frac{1}{5}$ and $\frac{4}{8} = \frac{6}{10}$ are incorrect.

Rosie's method doesn't always work. It works when multiplying or dividing both the numerator or denominator but not when adding or subtracting the same thing to both.

Ron thinks you can only simplify even numbered fractions because you keep on halving the numerator and denominator until you get an odd number.

Do you agree?
Explain your answer.

Ron is wrong. For example $\frac{3}{9}$ can be simplified to $\frac{1}{3}$ and these are all odd numbers.

Here are some fraction cards.
All of the fractions are equivalent.

$\frac{4}{A}$ $\frac{B}{C}$ $\frac{20}{50}$

A + B = 16
Calculate the value of C.

A = 10
B = 6
C = 15

Improper Fractions to Mixed Numbers and Vice Versa (Wednesday)

Spot the mistake

- $\frac{27}{5} = 5\frac{1}{5}$
- $\frac{27}{3} = 8$
- $\frac{27}{4} = 5\frac{7}{4}$
- $\frac{27}{10} = 20\frac{7}{10}$

What mistakes have been made?

Can you find the correct answers?

Three children have incorrectly converted $3\frac{2}{5}$ into an improper fraction.

Annie

$$3\frac{2}{5} = \frac{6}{15}$$

Mo

$$3\frac{2}{5} = \frac{15}{5}$$

Dexter

$$3\frac{2}{5} = \frac{32}{5}$$

What mistake has each child made?

Improper Fractions to Mixed Numbers and Vice Versa ANSWERS (Wednesday)

Spot the mistake

- $\frac{27}{5} = 5\frac{1}{5}$
- $\frac{27}{3} = 8$
- $\frac{27}{4} = 5\frac{7}{4}$
- $\frac{27}{10} = 20\frac{7}{10}$

What mistakes have been made?

Can you find the correct answers?

Correct answers

- $5\frac{2}{5}$ (incorrect number of fifths)
- 9 (incorrect whole)
- $6\frac{3}{4}$ (still have an improper fraction)
- $2\frac{7}{10}$ (incorrect number of wholes)

Three children have incorrectly converted $3\frac{2}{5}$ into an improper fraction.

Annie

$3\frac{2}{5} = \frac{6}{15}$

Mo

$3\frac{2}{5} = \frac{15}{5}$

Dexter

$3\frac{2}{5} = \frac{32}{5}$

What mistake has each child made?

Annie has multiplied the numerator and denominator by 3

Mo has multiplied the correctly but then forgotten to add on the extra 2 parts.

Dexter has just placed 3 in front of the numerator.

Always, sometimes, never?

If one denominator is a multiple of the other you can simplify the fraction with the larger denominator to make the denominators the same.

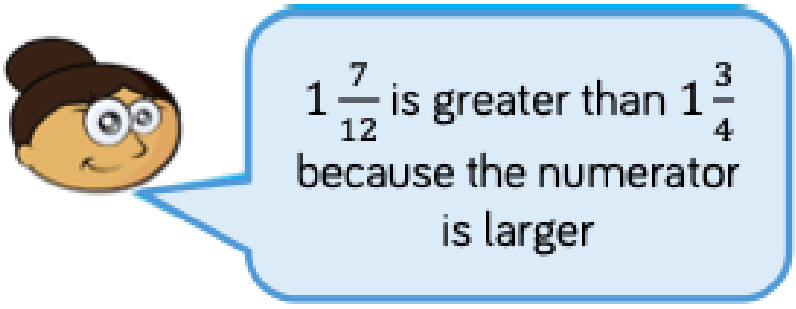
Example:

Could $\frac{?}{4}$ and $\frac{?}{12}$ be simplified to $\frac{?}{4}$ and $\frac{?}{4}$?

Prove it.

Dora looks at the fractions $1\frac{7}{12}$ and $1\frac{3}{4}$

She says,



Do you agree?

Explain why using a model.

Comparing and Ordering Fractions ANSWERS (Thursday)

Always, sometimes, never?

If one denominator is a multiple of the other you can simplify the fraction with the larger denominator to make the denominators the same.

Example:

Could $\frac{?}{4}$ and $\frac{?}{12}$ be simplified to $\frac{?}{4}$ and $\frac{?}{4}$?

Prove it.

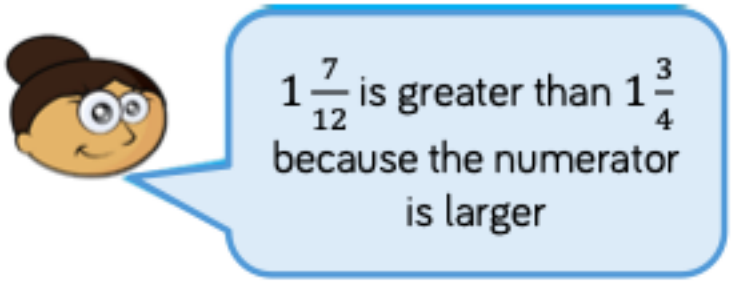
Sometimes

It does not work for some fractions e.g. $\frac{8}{15}$ and $\frac{3}{5}$

But does work for others e.g. $\frac{1}{4}$ and $\frac{9}{12}$

Dora looks at the fractions $1\frac{7}{12}$ and $1\frac{3}{4}$

She says,



Do you agree?

Explain why using a model.

Possible answer:

I do not agree because $1\frac{3}{4}$ is equivalent to $1\frac{9}{12}$ and this is greater than $1\frac{7}{12}$