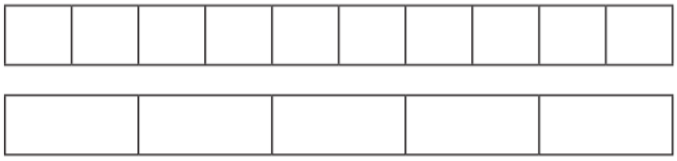
Thursday 6.5.21

MPI: adding fractions

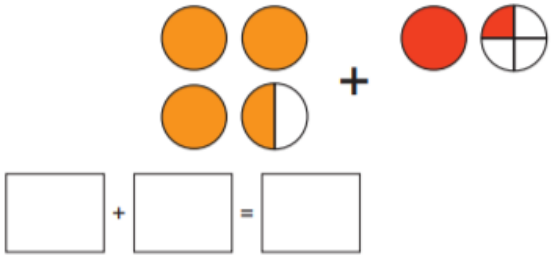
Spicy

Complete the addition.

$\frac{3}{10} + \frac{2}{5} = \square$



Complete the calculation that is represented.

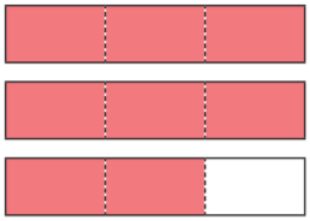


Show the method that you used.

$\frac{1}{3} + \frac{2}{9} =$ $\frac{3}{7} + \frac{7}{21} =$ $\frac{8}{15} + \frac{1}{5} =$ $\frac{3}{16} + \frac{3}{8} + \frac{1}{4} =$

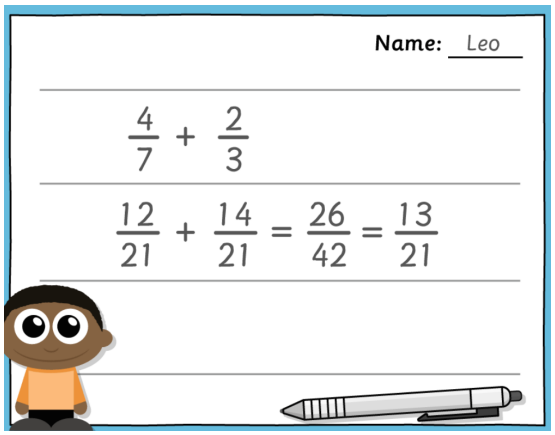
Work out the addition.

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



$\frac{1}{5} + \frac{3}{4} = \frac{?}{?}$

| multiples of | |
|---|---|
| 5 | 4 |
| | |
| | |
| | |
| | |
| | |




*Leo has added 4/7 to 2/3 to get the answer 13/21. Explain what Leo has done wrong and calculate the correct answer:*

Thursday 6.5.21

MPI: adding fractions

Extra Spicy

Complete the calculations.

a) $2\frac{3}{5} + 1\frac{3}{10} =$ ☐

b) $4\frac{7}{15} + 2\frac{1}{3} =$ ☐

c) $3\frac{5}{9} + 1\frac{1}{4} =$ ☐

d) $7\frac{5}{8} + 1\frac{2}{3} =$ ☐

e) $\frac{11}{16} + \frac{\square}{16} = 1\frac{1}{2}$

f) $\square\frac{9}{10} + 3\frac{\square}{10} = 5\frac{3}{5}$

g) $3\frac{7}{10} + 2\frac{9}{10} =$

h) $2\frac{2}{21} + 5\frac{1}{6}$

i) $4\frac{2}{7} + 2\frac{1}{4} + 1\frac{1}{3}$

Use the same digit in both boxes to complete the calculation.
Is there more than one way to do it?

$$\frac{\square}{20} + \frac{1}{\square} = \frac{9}{20}$$

**Name:** Abbie

$$2\frac{1}{3} - 1\frac{3}{4} = \frac{28}{12} - \frac{21}{12}$$

*Abbie says, "You can always find the lowest common denominator of two fractions by multiplying the denominators."*

*Does Abbie's method **always** work, **sometimes** work or **never** work? Explain your answer, giving examples.*

Alex is adding fractions.

$$\frac{3}{5} + \frac{1}{15} = \frac{4}{20} = \frac{1}{5}$$

Do you agree with her?
Explain your answer.

Tuesday 11.5.21

Subtracting fractions

Spicy

$\frac{1}{8} - \frac{1}{24} =$

$\frac{1}{3} - \frac{1}{12} =$

$\frac{1}{4} - \frac{1}{8} - \frac{1}{24} =$

$\frac{1}{5} - \frac{1}{20} =$

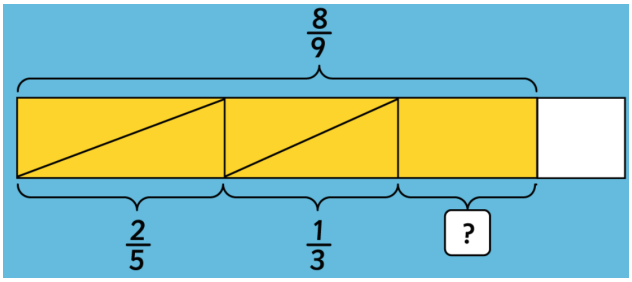
$\frac{1}{6} - \frac{1}{24} =$

$\frac{1}{4} - \frac{1}{5} - \frac{1}{20} =$

$\frac{7}{4} - \frac{2}{3} - \frac{1}{6}$

| multiples of | | |
|---|---|---|
| 4 | 3 | 6 |
| | | |
| | | |
| | | |
| | | |

Jen has 8/9 of a bar of chocolate. She gives 2/5 of the bar to Eloise and 1/3 to Imogen. What fraction of a bar of chocolate does Jen have left?




$\frac{3}{4} + \frac{5}{8}$

$\frac{2}{5} + \frac{9}{25}$

$\frac{3}{4} - \frac{5}{8}$

$\frac{2}{5} - \frac{9}{25}$

$\frac{23}{24} - \frac{1}{4}$

$\frac{1}{8} - \frac{1}{56}$

$\frac{23}{24} + \frac{1}{4}$

$\frac{1}{7} + \frac{1}{56}$

| Calculations with answers less than 1 | Calculations with answers greater than 1 |
|---|---|
| | |

Tuesday 11.5.21

Subtracting fractions

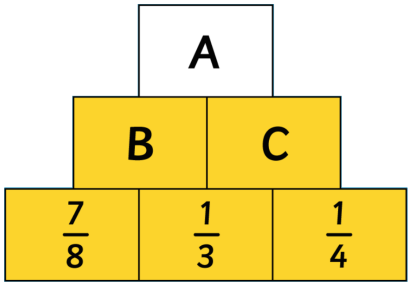
Extra Spicy

$2\frac{1}{3} - 1\frac{1}{9} =$

$6\frac{7}{8} - 2\frac{1}{4} =$

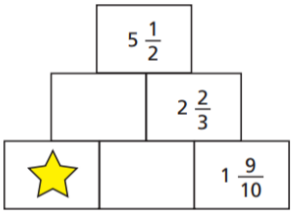
$10\frac{2}{5} - 3\frac{7}{10} =$

$4\frac{1}{7} - 3\frac{13}{14} =$




*Find the difference between two side-by-side fractions to find the answer to the box above.*
*What fraction goes in box A?*

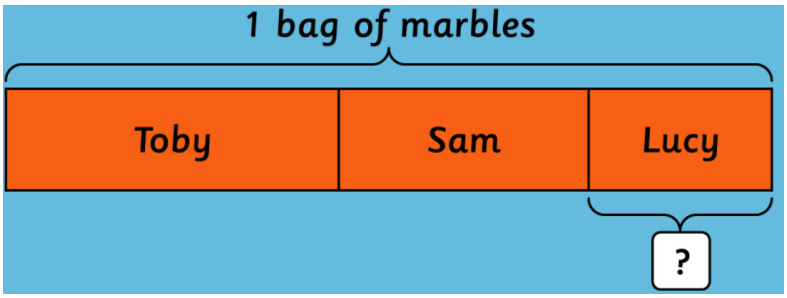
In this addition pyramid, a number is the sum of the two numbers below it.

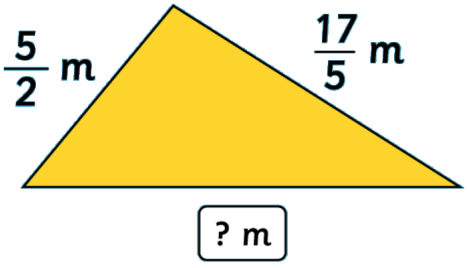



Work out the value of the star.

*Lucy has a bag of marbles. She gives 2/5 of the marbles to Toby and 3/8 to Sam.*

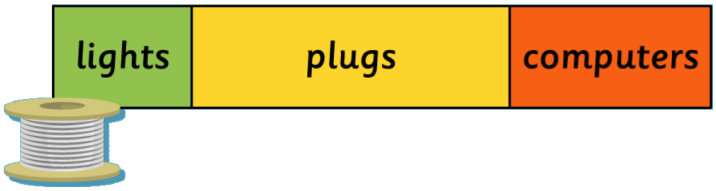
*What fraction of the bag of marbles does Lucy have left?*




*A triangle has a perimeter of 123/10 metres (m). One side of the triangle measures 5/2 m and another side measures 17/5 m. The missing side length measures _____ metres.*

*An electrician working in a school has 7 metres (m) of wire. He uses 1 4/5 m of wire for the lights and 3 3/4 m for the plug sockets. If the electrician needs 223 centimetres of wire for the computers, what fraction of a metre more wire will he need to complete his work?*
*Give your answer as a fraction in its simplest form.*



Tuesday 17.3.20

Subtracting fractions

SATS questions

**1** $\frac{3}{4} - \frac{3}{10} =$

**2** $\frac{6}{7} - \frac{3}{4} =$

**3** $1\frac{1}{7} - \frac{3}{7} =$

**4** $\frac{4}{5} - \frac{7}{10} =$

**5** $\frac{3}{4} - \frac{1}{10} =$

**6** $\frac{11}{9} - \frac{4}{9} =$

**7** $\frac{1}{4} - \frac{1}{6} =$

**8** $\frac{5}{6} - \frac{2}{3} =$

**9** $\frac{4}{5} - \frac{1}{5} =$

**10** $1\frac{1}{5} - \frac{1}{4} =$

**11** $1\frac{1}{4} - \frac{1}{3} =$

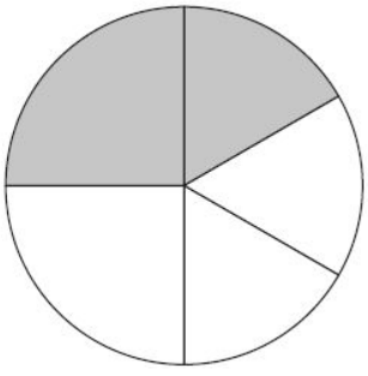
**12** $\frac{3}{10} - \frac{1}{20} =$

**13** $\frac{3}{4} - \frac{3}{8} =$

**14** $\frac{2}{6} - \frac{1}{8} =$

**15** $\frac{62}{100} - \frac{38}{100} =$

In this circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.



What fraction of the whole circle is **not** shaded?

Wednesday 12.5.21

Multiplying fractions

Spicy

a) $\frac{1}{4} \times \frac{1}{5} = \square$

b) $\frac{1}{5} \times \frac{1}{6} = \square$

c) $\square = \frac{1}{7} \times \frac{1}{8}$

d) $\frac{1}{8} \times \frac{1}{9} \times \frac{1}{10} = \square$

e) $\frac{3}{4} \times \frac{1}{5} = \square$

f) $\frac{2}{5} \times \frac{5}{6} = \square$

g) $\frac{5}{7} \times \frac{5}{8} = \square$

h) $\frac{3}{8} \times \frac{2}{9} \times \frac{3}{10} = \square$

$\frac{1}{8} \times \frac{1}{8}$ $\quad$ $\frac{3}{18} \times \frac{1}{3}$ $\quad$ $1 \times \frac{1}{4}$ $\quad$ $\frac{2}{5} \times 3\frac{1}{4}$

Match the calculations.

| | | |
|---|---|---|
| $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ | $\frac{2}{3} + \frac{2}{3}$ | $\frac{1}{2} \times 6$ |
| $\frac{1}{8} \times \frac{1}{3} = \frac{1}{24}$ | $\frac{1}{4} \times 24$ | $18 \times \frac{1}{4}$ |
| $\frac{1}{16} \times \frac{1}{4} = \frac{1}{64}$ | $\frac{3}{4} + \frac{3}{4} + \frac{3}{4} + \frac{3}{4}$ | $\frac{1}{6} \times 10$ |
| $\frac{\square}{\square} \times \frac{\square}{\square} = \frac{?}{?}$ | $\frac{5}{12} \times 4$ | $12 \times \frac{1}{2}$ |
| | $1\frac{1}{2} \times 3$ | $\frac{1}{3} \times 4$ |

Wednesday 12.5.21

Multiplying fractions

Extra Spicy

$4\frac{1}{9} \times 3 =$

$10 \times \frac{5}{7} =$

$\frac{1}{7} \times \frac{2}{3} \times \frac{3}{2}$

$\frac{2}{7} \times 2$

$5\frac{4}{5} \times \frac{1}{2}$

$\left(\frac{1}{7} + \frac{3}{14}\right) \times \left(3 - \frac{1}{5}\right)$

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

$2\frac{5}{11} \times 1\frac{2}{3}$

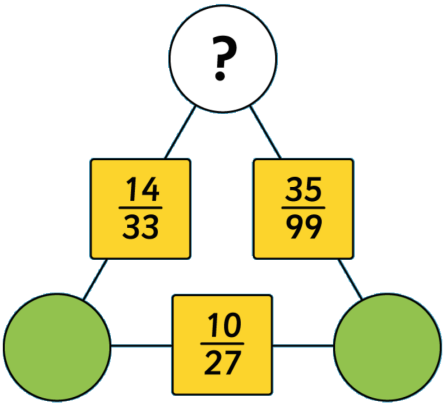
Rico is trying to solve this problem. He knows that 8/21 has not been simplified. Explain how Rico could find the missing fraction..

$$\frac{4}{7} \times \frac{?}{?} = \frac{8}{21}$$

$\frac{5}{6} \times \square = \square \frac{1}{3}$

$\frac{\square}{12} \times 5 = 4\frac{\square}{6}$

The fraction in each square is the product of two proper fractions that go in the circles on either side of it.
What fraction is missing from the top circle?



Wednesday 18.3.20

Multiplying fractions

SATS questions

1 $1\frac{1}{2} \times 57 =$

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

3 $2\frac{3}{4} \times 3 =$

4 $\frac{3}{4} \times \frac{5}{7} =$

5 $1\frac{1}{4} \times 4 =$

6 $\frac{1}{5} \times 70 =$

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

8 $\frac{1}{4} \times \frac{3}{7} =$

9 $\frac{1}{4} \times \frac{1}{8} =$

10 $17 \times 1\frac{1}{2} =$

11 $\frac{4}{6} \times \frac{3}{5} =$

12 $1\frac{3}{4} \times 10 =$

13 $\frac{5}{6} \times 540 =$

14 $1\frac{1}{2} \times 40 =$

15 $\frac{5}{6} \times 24 =$

Thursday 13.5.21

MPI: dividing fractions by whole numbers

Spicy

$\frac{5}{9} \div 2 = \frac{5}{9} \times \square$

$\frac{2}{3} \div 7 = \square \times \square$

$\square = \frac{4}{5} \div 2$

b) $\frac{12}{25} \div \square = \frac{4}{25}$

$\frac{1}{7} \times \frac{1}{4} = \frac{1}{7} \div \square$

$\frac{3}{5} \times \frac{1}{2} = \frac{3}{5} \div \square$

$\square = \frac{4}{10} \div 4$

$\frac{12}{25} \div \square = \frac{3}{25}$

$\square = \frac{4}{20} \div 4$

$\frac{12}{25} \div \square = \frac{2}{25}$

$\square = \frac{2}{10} \div 2$

$\frac{\square}{25} \div 6 = \frac{4}{25}$

$\frac{3}{4}$ of a kilogram of rice is divided equally between two bowls.

How much rice is in each bowl?

Huan shares $\frac{8}{10}$ of a litre of juice equally between 4 glasses.

How much juice is in each glass?

*'Sofia is running a half-marathon. She is $\frac{1}{3}$ of the way through the race. What fraction of a full marathon has she completed?'*

*'Joel has $\frac{3}{4}$ litre of juice. He divides it equally between 5 glasses. What fraction of a litre is in each glass?'*

Thursday 13.5.21

MPI: dividing fractions by whole numbers

Extra Spicy

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

$\frac{10}{15} \div 2 = \frac{\square}{15} = \square$

$\frac{20}{45} \div 4 = \square = \square$

d) $\frac{18}{45} \div 2 = \square = \square$

e) $\frac{24}{56} \div 3 = \square = \square$

f) $\square = \square = \frac{21}{56} \div 3$

Write <, > or = to complete each statement.

a) $\frac{1}{3} \div 5 \bigcirc \frac{1}{5} \div 3$

b) $\frac{1}{3} \div 3 \bigcirc \frac{1}{5} \div 5$

c) $\frac{3}{5} \div 5 \bigcirc \frac{3}{5} \div 3$

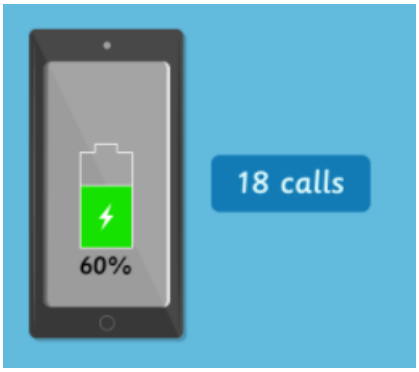
*Fill in the missing numbers to make these statements true*

$\frac{2}{9} \div \square = \frac{2}{63}$

$\frac{\square}{\square} \div 5 = \frac{3}{35}$

$\frac{\square}{10} \div 3 = \frac{\square}{6}$

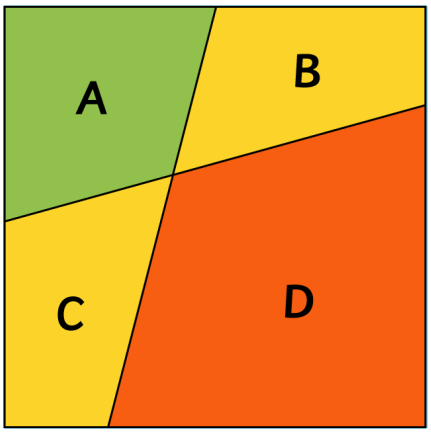
$\frac{4}{5} \div \square = \frac{1}{10}$




*Mick's phone has 60% battery power remaining. He makes 18 phone calls before his battery runs out. On average, what **fraction** of the battery does the phone use for **each** call?*

*Use the following clues to calculate the size of **section A** as a fraction of the complete square:*

- *Section B is 1/7 of the complete square.*
- *Section C is the same size as section B.*
- *Section D is twice the size of section A.*



A little monkey had 60 peaches...

On the first day, he decided to keep 3/4 of his peaches. He gave the rest away. Then he ate one.

On the second day, he decided to keep 7/11 of his peaches. He gave the rest away. Then he ate one.

One the third day, he decided to keep 5/9 of his peaches. He gave the rest away. Then he ate one.

On the fourth day, he decided to keep 2/7 of his peaches. He gave the rest away. Then he ate one.

On the fifth day, he decided to keep 2/3 of his peaches. He gave the rest away. Then he ate one.

How many peaches did he have left at the end?

A little monkey had some peaches...

On the first day, he decided to keep 1/2 of his peaches. He gave the rest away. Then he ate one.

On the second day, he decided to keep 1/2 of his peaches. He gave the rest away. Then he ate one.

On the third day, he decided to keep 1/2 of his peaches. He gave the rest away. Then he ate one.

On the fourth day, he found he only had one peach left.

How many peaches did he have at the beginning?

A little monkey had 75 peaches...

Each day, he kept a fraction of his peaches, gave the rest away and then ate one. These are the fractions he decided to keep:

1/2, 1/4, 3/4, 3/5, 5/6, 11/15

In which order did he use the fractions so that he was left with just one peach at the end?

Whenever the monkey has peaches, he always keeps a fraction of them each day, gives the rest away and then eats one.
I wonder how long he could make his peaches last for?
Here are his rules:

- Each fraction must be in its simplest form and must be less than one.
- The denominator is never the same as the number of peaches left (for example, if there were 45 peaches left, he would not be allowed to keep 44/45 of them).

What is the longest that you can make the peaches last, starting with fewer than 100 peaches?