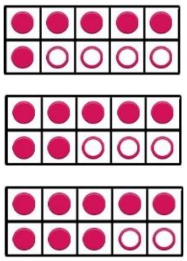
Varied Questioning – EYFS

Match number sentences to visuals

8 + 2 = 10

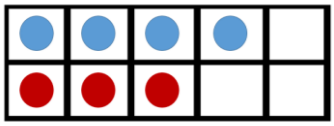
6 + 4 = 10

7 + 3 = 10

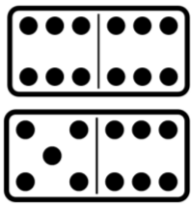


So what is…

4 + 3 = 7



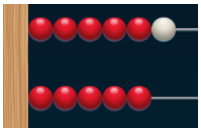
So what is 5+3?



6 + 6 = 12

6 + 5 =

Show 10 as 2 rods of 5. Add 1 more.



So what is 6+5?

Use different representations

'Sara has 6 grapes and 5 cherries. How many pieces of fruit?'

Children select equipment (e.g. objects, number track) and way to calculate (e.g. 1:1 counting, group counting, derived fact). Children encouraged to use multiple strategies; teacher draws attention to different approaches.

Match or order quantities represented in different ways: dice, dominoes, Numicon, 10-frame, dot patterns, finger patterns, tally charts.

How many ways?

There are 6 people in the house. How many upstairs? How many downstairs?

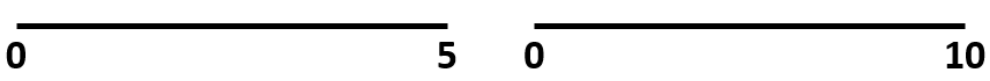
How many ways can you find?

There are 5 frogs on the lily pads. How many on the big lily pad? How many on the small lily pad?

How many ways can you find?

Spatial reasoning

Point to where 4 is on each number line.



Different forms of number

4+3: *A farmer had 4 sheep. He buys 3 more. How many sheep does he have now? (items)*
A plant was 4cm tall. It grew 3cm. How tall is it now? (length)
Jennifer is 4. How old will she be in 3 years' time? (time)

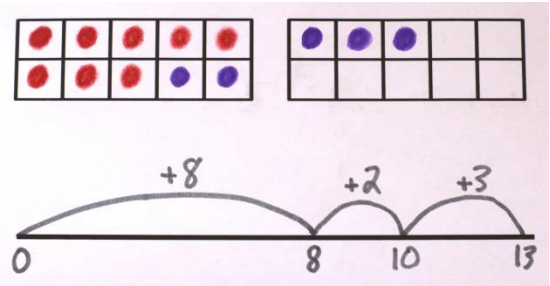
Change the unknown

Ben had some toy cars. He got 4 more on his birthday. Now he has 9 cars. How many cars did he have?
Ben had 5 toy cars. He was given more for his birthday. Now he has 9 cars. How many cars was he given?

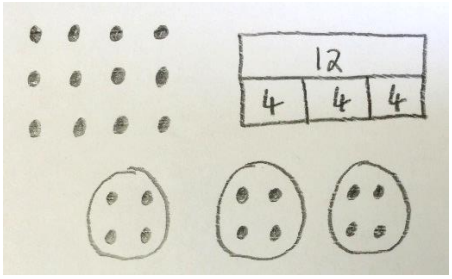
Varied Questioning – KS1

Show in different ways

Show 8+5 on a 10-frame and on the number line:



Draw a picture to show 4x3:



The order makes you think

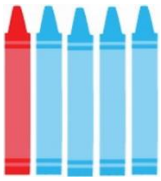
12 – 7 =
12 – 6 =
12 – 5 =
Continue the pattern

7 + 5 =
17 + 5 =
27 + 5 =
Continue the pattern

½ of 12 =
½ of 10 =
½ of 8 =
½ of ___ =

Find the mistakes

Correct or not correct: '¼ of the crayons are red'



5 = ___ - 7

Answer:
(a) 2 (b) 12

How many ways?

Skittles: 1p

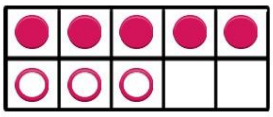
Cola bottles: 2p

Mints: 3p

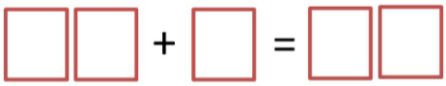
Gobstoppers: 4p

Kath spent 5p on sweets. What could she have bought?

This picture shows 5+3=8



How many ways can you make 8?

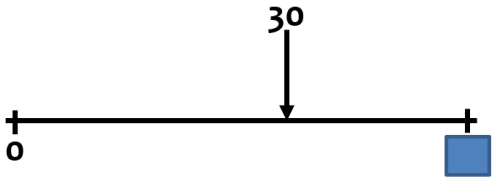


Complete using digits 0-9 with no repeats

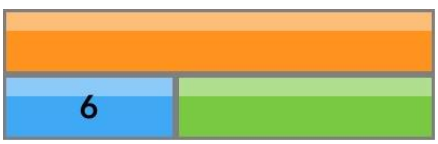
Less information

Images that give enough information to estimate the answer(s):

Estimate the number in the blue box:



Write different number sentences using this image:



Always, sometimes or never true?

'Big objects are heavier than small objects.'
'When adding, it doesn't matter which number you add first'
'Halving even numbers make them odd'

Forwards and backwards

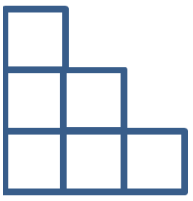
9 – 6 = ___

9 – ___ = 6

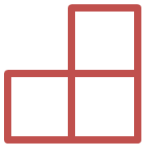
___ – 9 = 6

Supported with visuals:
'5 people got off the bus. Now there are 6 passengers left. How many people were on the bus before the stop?'

Shade in $\frac{1}{2}$ of this shape:



This is $\frac{1}{4}$ of a shape.
Draw what the whole shape could be:



Sign swap

Equals sign first; calculations both sides; use greater than/less than; children answer with sign.

____ = 7 - 2 *5 + ____ = 8 + 3* *____ - 6 < 5* *8 x 2 ☐ 30 - 16*

$\frac{1}{\square} > \frac{1}{\square}$ *fill in the denominators to make this correct.*

Different situations

4+3:

A farmer had 4 sheep. He buys 3 more. How many sheep does he have now?

A plant was 4cm tall. It grew 3cm. How tall is it now?

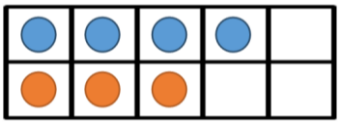
Jennifer is 4. How old will she be in 3 years' time?

6x4:

Joshua buys 4 packs of stickers. There are 6 stickers per pack. How many stickers does he have?

On the menu there are 6 main meals and 4 puddings. How many combinations of meals are there?

Find another way



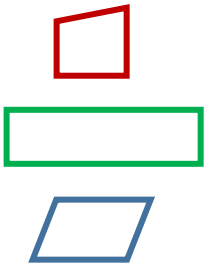
11-9 3+3+3+4 19+19

4+3 'How do you know?'

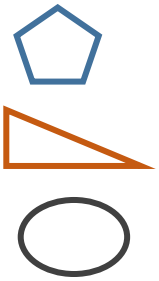
Guess the rule

I like	I don't like
8	7
30	21
100	5

Yes



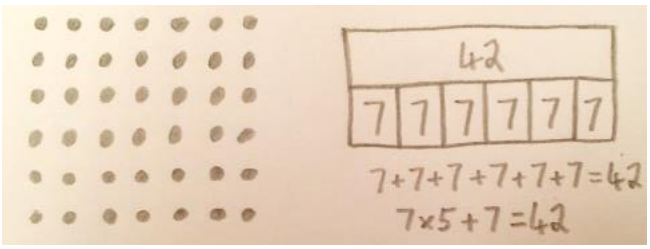
No



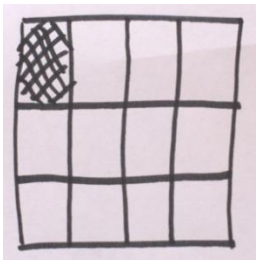
Varied Questioning – KS2

Show in different ways

Show 7x6 as an array, a bar model and using two number sentences:



Draw an image to show $\frac{1}{4} \times \frac{1}{3}$:



The order makes you think

700 + 600 = 1300
70 + 60 = 130
7 + 6 = 13
Can you continue the pattern?

396 – 100 =
396 – 99 =
396 – 101=

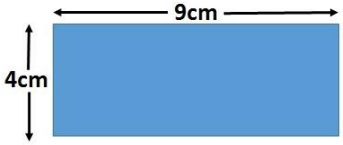
24 ÷ ___ = 6
240 ÷ ___ = 6
240 ÷ ___ = 60

¼ of ___ = ½ of ___
¾ of ___ = ½ of ___
¾ of ___ = ¼ of ___

Find the mistakes

Correct or not correct:

'The perimeter of the rectangle is 13'



What is ___ ÷ 3 = 12? (a) 36 (b) 4

How many ways?

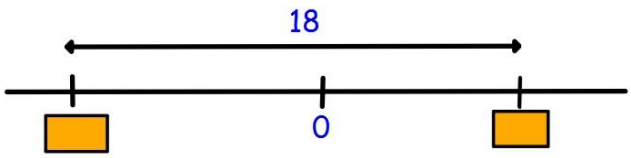
Complete using digits 0-9 with no repeats

Complete using positive whole numbers

$$\frac{\square}{5} + \frac{2}{\square} = \frac{\square}{20}$$

Less information

Images that give enough information to estimate the answer(s):



Estimate the perimeter:

Always, sometimes or never true?

'Halving an even number makes it odd'
'Multiples of 3 are always multiples of 12'
'Apart from 1, odd square numbers have 3 factors'

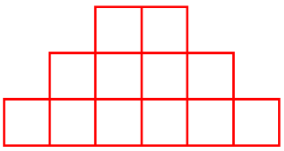
Forwards and backwards

$12 \div 3 = \square$

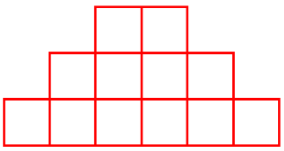
$12 \div \square = 3$

$\square \div 12 = 3$

Shade in $\frac{2}{3}$ of this shape:



This is $\frac{2}{3}$ of a shape. Draw what the whole shape could be:



Sign swap

Equals sign first; calculations both sides; use greater than/less than; children answer with sign.

____ = 72 - 25 *____ x 2 = ____ ÷ 7* *7 < 30 ÷ ____* *7 x 4 ☐ 32 – 5*

$\frac{1}{\square} > \frac{3}{\square}$ *fill in the denominators to make this correct.*

Different contexts

6x4:

Joshua buys 4 packs of stickers. There are 6 stickers per pack. How many stickers does he have?

On the menu there are 6 main meals and 4 puddings. How many combinations of meals are there?

40÷6:

Jen needs 40 drinks for the party. They are sold in packs of 6. How many packs does she need?

Cupcakes are sold in boxes of 6 cakes. There are 40 cupcakes. How many boxes can be sold?

6 friends go for a meal. They split the £40 bill equally. How much do they each pay?

Find another way

201-199 99% of 400 59 x 60 250 x 32 $\frac{4}{8} + \frac{5}{10}$

Guess the titles