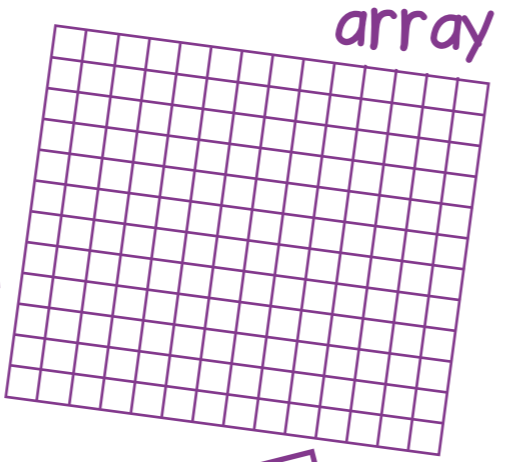
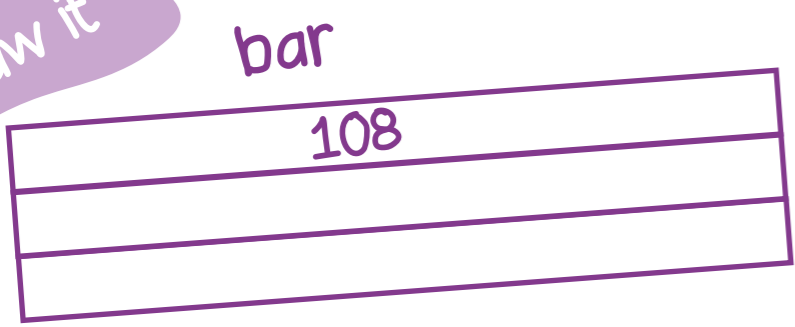
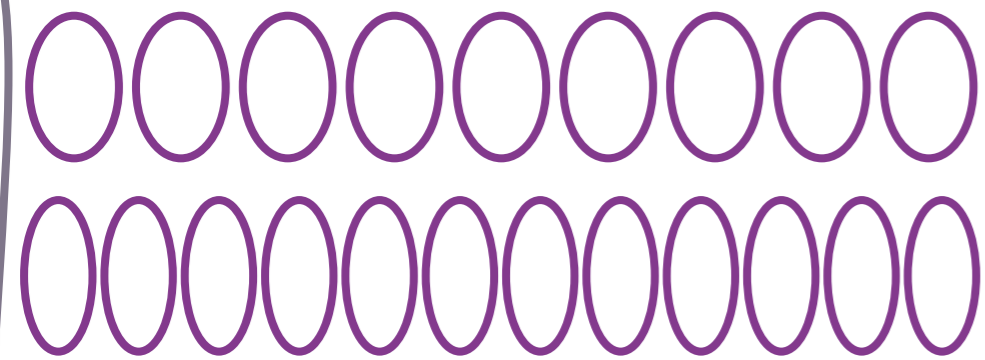


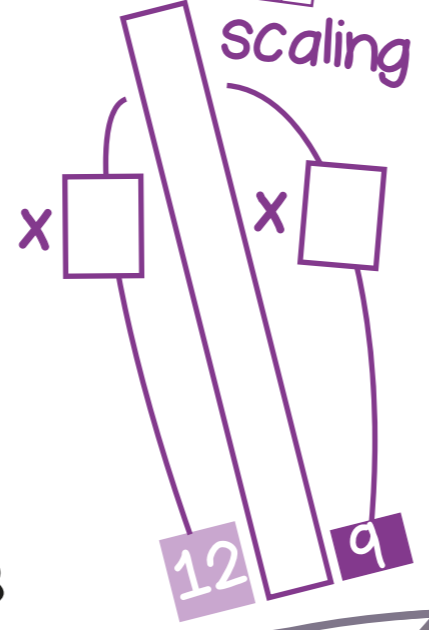
Draw it



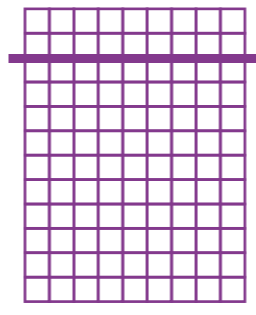
groups



number line



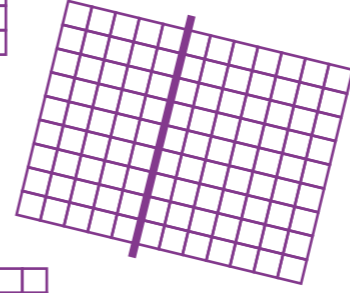
Dissect it



$$9 \times 12 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

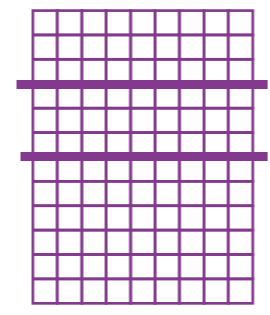
$$= \square$$



$$9 \times 12 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

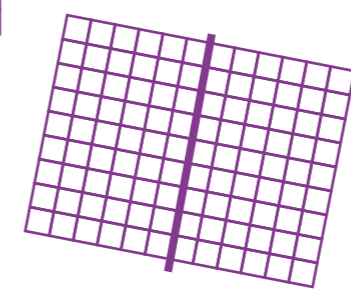
$$= \square$$



$$9 \times 12 = 9 \times \square + 9 \times \square + 9 \times \square$$

$$= \square + \square + \square$$

$$= \square$$



$$9 \times 12 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

$$= \square$$



If I know $9 \times 12 = 108$ then I also know...

$\square \times \square = 108$

___ multiplied by ___ is ___

$108 = \square \times \square$

___ groups of ___ is ___

$108 = \square \times \square$

___ shared equally between 9 is ___ each

$\square \div \square = \square$

___ put into groups of 9 is ___ groups of 9

$\square = \square \div \square$

___ and ___ are factors of ___

___ is a multiple of ___ and ___



$90 = \square \div 12$

$10,800 = \square \times 12$

$12 = \square \div 90$

$\square \times 9 = 108$

$\frac{1}{9}$ of $\square = 12$

Each packet has 12 biscuits. How many biscuits are there in nine packets **altogether**?

Each ticket for a concert costs £90. How much would 12 tickets cost **in total**?

On a bracelet, **each** charm is worth £90. How many charms are worth £1080 **altogether**?

Bags of nuts weigh 900g **each**. How many bags of nuts can be filled from 10.8kg of nuts?



$1080 \div 9 = 120$
True or false?

Derive it

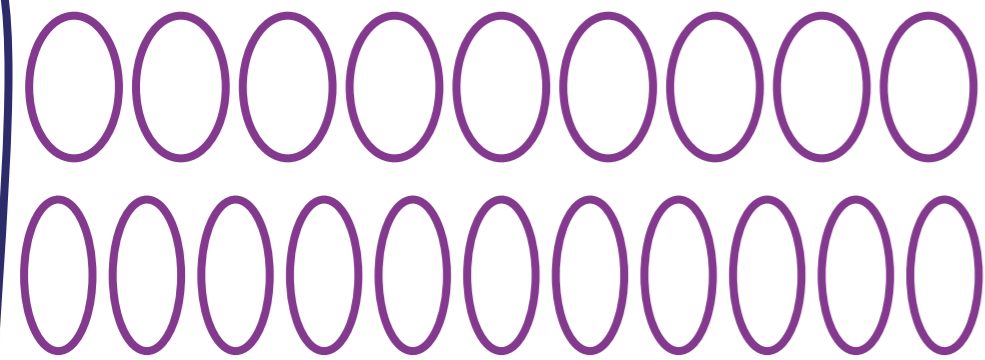
Deepen it

Draw it

bar



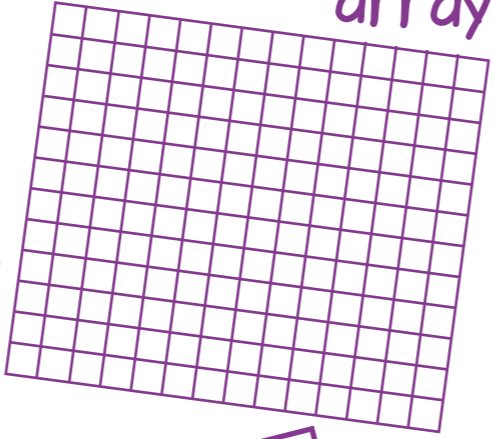
groups



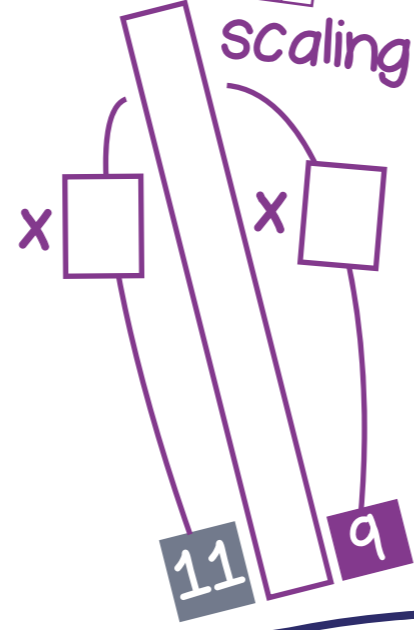
number line



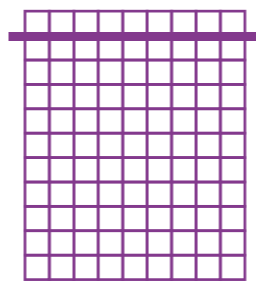
array



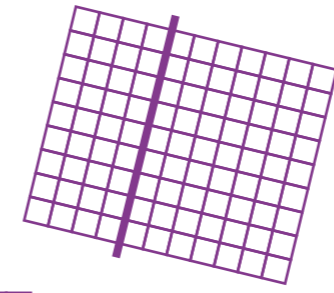
scaling



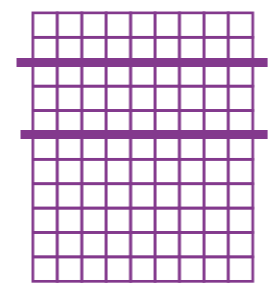
Dissect it



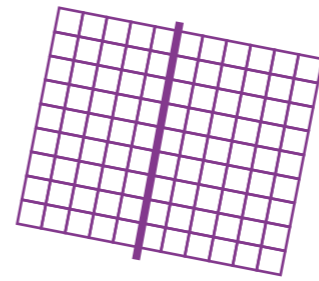
$$9 \times 11 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 11 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 11 = 9 \times \square + 9 \times \square + 9 \times \square$$
$$= \square + \square + \square$$
$$= \square$$



$$9 \times 11 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



If I know $9 \times 11 = 99$ then I also know...

$$\square \times \square = 99$$

___ multiplied by ___ is ___

$$99 = \square \times \square$$

___ groups of ___ is ___

$$99 = \square \times \square$$

___ shared equally between 9 is ___ each

$$\square \div \square = \square$$

___ put into groups of 9 is ___ groups of 9

$$\square = \square \div \square$$

___ and ___ are factors of ___

___ is a multiple of ___ and ___

$$90 = \square \div 11$$

A delivery route is 90km. How far does a delivery van travel if it completes the route 11 times?

$$9900 = \square \times 11$$

Each of the 11 footballers in a team gets paid £900. How much does this cost in total?

$$11 = \square \div 90$$

Parcels each weigh 9kg. The total of all the parcels is 99kg. How many parcels are there?

$$\square \times 9 = 990$$

$$\frac{1}{9} \text{ of } \square = 110$$

In 9 months a car travels 9900km. How many km does it travel each month if each month is the same?



$990 \div 90 = 11$
True or false?

Derive it

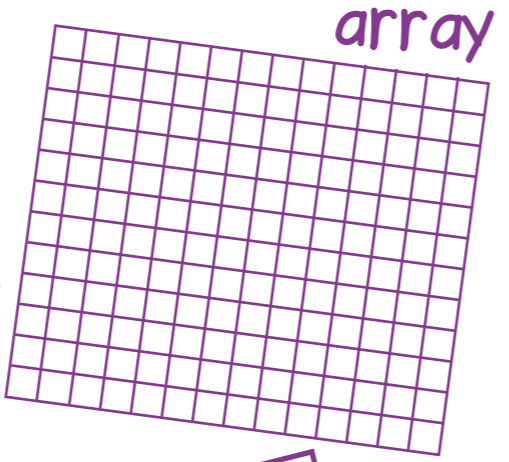
Deepen it

Draw it



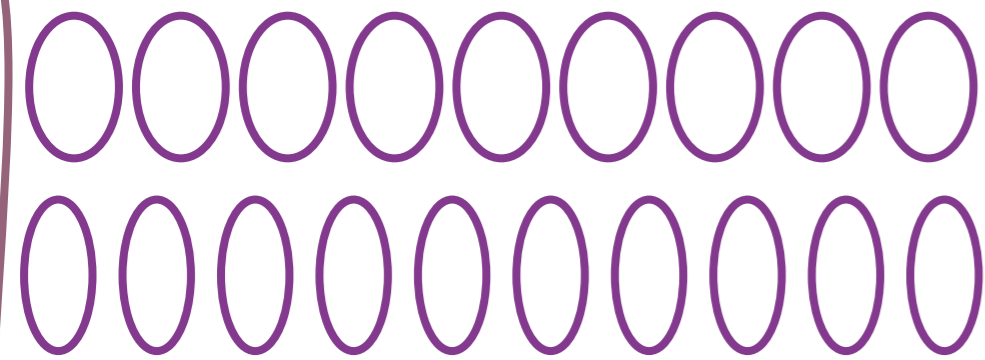
bar

90

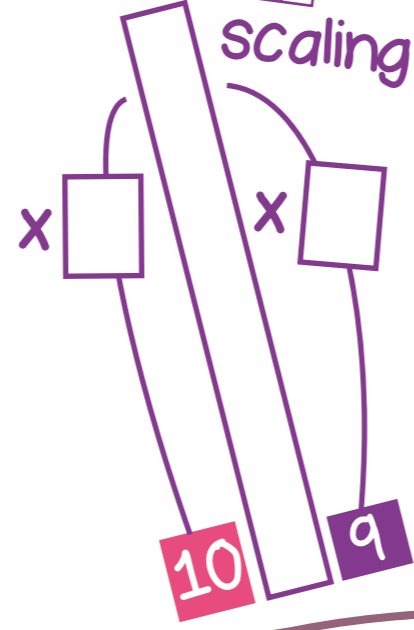


array

groups

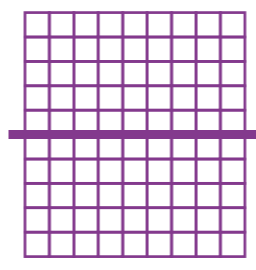


number line



scaling

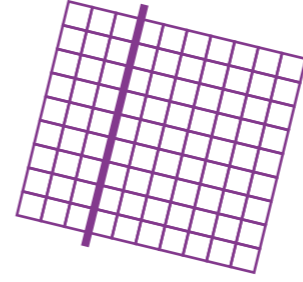
Dissect it



$$9 \times 10 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

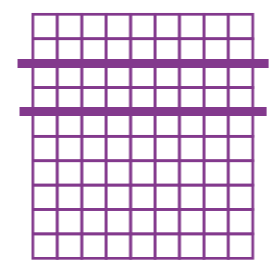
$$= \square$$



$$9 \times 10 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

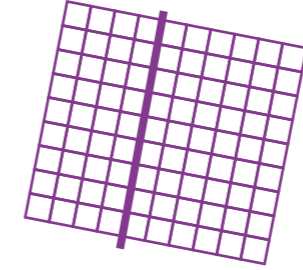
$$= \square$$



$$9 \times 10 = 9 \times \square + 9 \times \square + 9 \times \square$$

$$= \square + \square + \square$$

$$= \square$$



$$9 \times 10 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

$$= \square$$



If I know $9 \times 10 = 90$ then I also know...

- $\square \times \square = 90$
- $90 = \square \times \square$
- $90 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

- $90 = \square \div 10$
- $9000 = \square \times 10$
- $10 = \square \div 90$
- $\square \times 9 = 9000$
- $\frac{1}{9}$ of $\square = 100$



$900 \div 90 = 10$
True or false?

Each packet of sweets weighs 90g. How much do ten packets weigh?

Each jug holds 900ml of milk. How many jugs can be filled with 90 litres of milk?

A bad golfer takes 10 shots at each hole of a nine hole golf course. How many shots does he take in total?

9000 spectators are equally divided into 9 areas in a stadium. How many are in each area?

Derive it

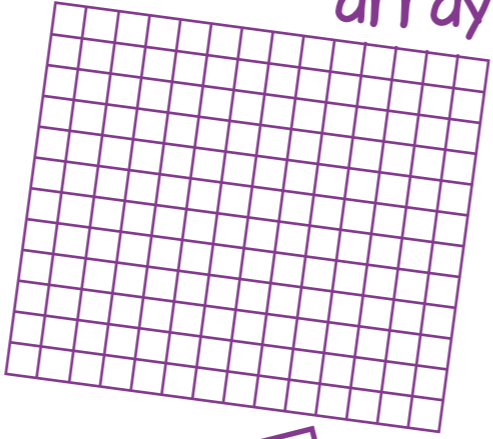
Deepen it

Draw it

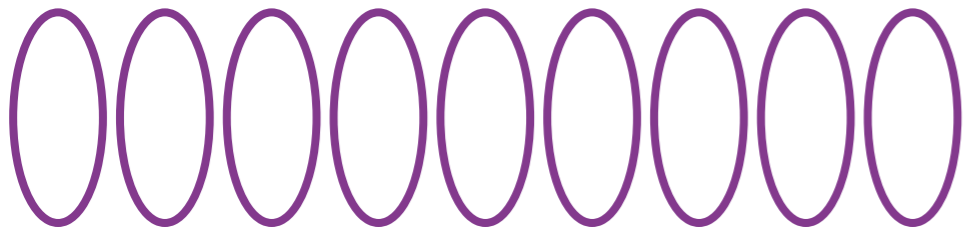
bar



array



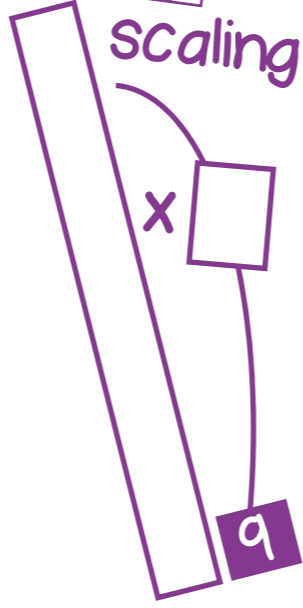
groups



number line



scaling

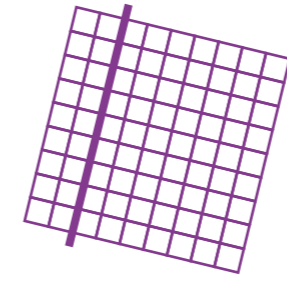
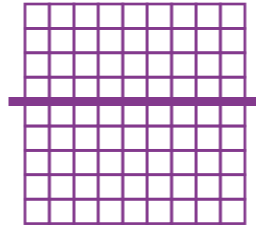


Dissect it

$$9 \times 9 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

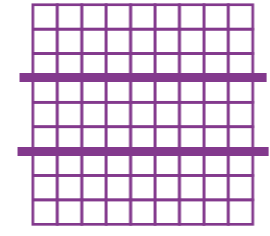
$$= \square$$



$$9 \times 9 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

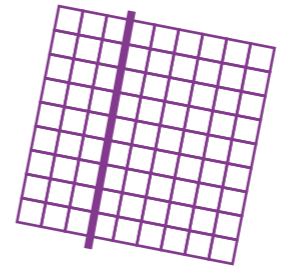
$$= \square$$



$$9 \times 9 = 9 \times \square + 9 \times \square + 9 \times \square$$

$$= \square + \square + \square$$

$$= \square$$



$$9 \times 9 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

$$= \square$$



If I know $9 \times 9 = 81$ then I also know...

$\square \times \square = 81$

___ multiplied by ___ is ___

$90 = \square \times \square$

___ groups of ___ is ___

$\square \div \square = \square$

___ shared equally between 9 is ___ each

$\square = \square \div \square$

___ put into groups of 9 is ___ groups of 9

___ and ___ are factors of ___

___ is a multiple of ___ and ___

$90 = \square \div 9$

$8100 = \square \times 9$

$9 = \square \div 90$

$\square \times 9 = 8100$

$\frac{1}{9}$ of $\square = 90$

Nine children **each** read nine books. How many books have they read **altogether**?

A large paved area has 90 rows of 90 slabs. How many slabs are there **in total**?

Nine equal bags of apples weigh a **total** of 8100g. What is the weight of **each** bag?

From winnings of £810, £90 is given to each winner. How many winners are there?



$90 \div 81 = 90$
True or false?

Derive it

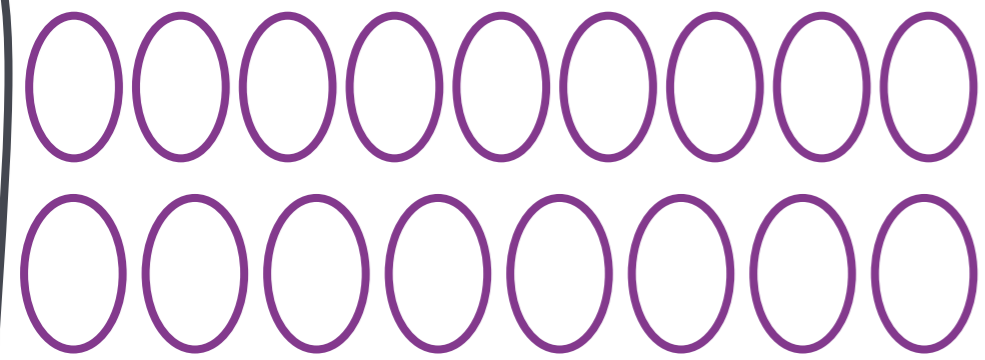
Deepen it

Draw it

bar



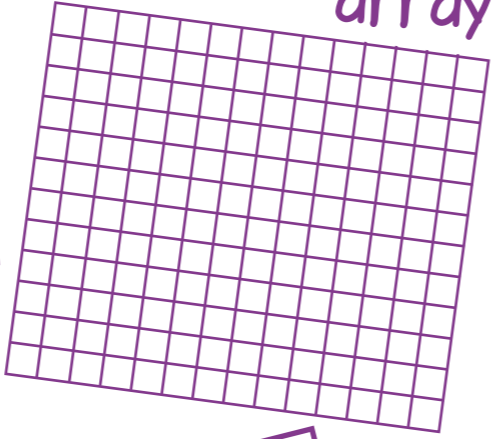
groups



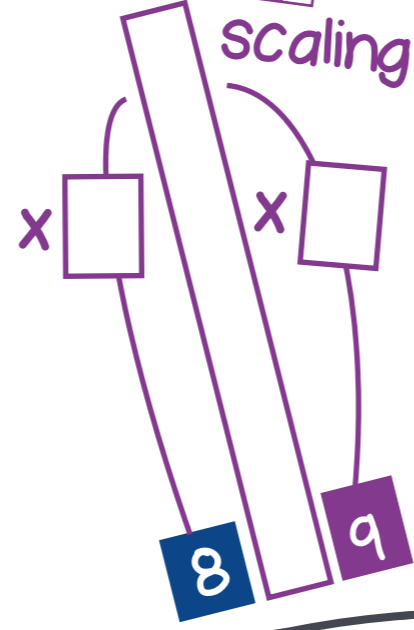
number line



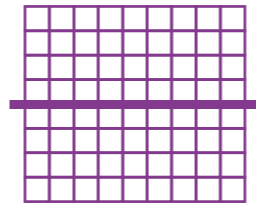
array



scaling



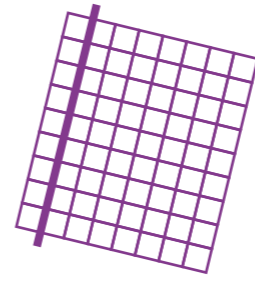
Dissect it



$$9 \times 8 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

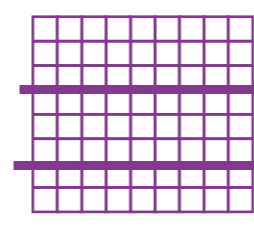
$$= \square$$



$$9 \times 8 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

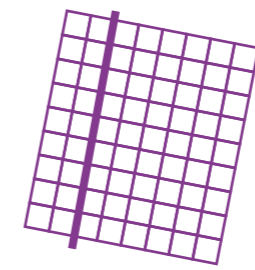
$$= \square$$



$$9 \times 8 = 9 \times \square + 9 \times \square + 9 \times \square$$

$$= \square + \square + \square$$

$$= \square$$



$$9 \times 8 = 9 \times \square + 9 \times \square$$

$$= \square + \square$$

$$= \square$$



If I know $9 \times 8 = 72$ then I also know...

- $\square \times \square = 72$
- $72 = \square \times \square$
- $72 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

- $90 = \square \div 8$
- $7200 = \square \times 80$
- $80 = \square \div 9$
- $\square \times 9 = 7200$
- $\frac{1}{9}$ of $\square = 80$



$8 \div 72 = 9$
True or false?

How many sides are there **in total** on nine octagons?

A manager spends £7200 on nine days at the races. Each day costs the same. How much does **each** day cost?

How many degrees are there **altogether** in eight right angles?

720ml of juice is poured equally into nine small glasses. How much juice is poured into **each** glass?

Derive it

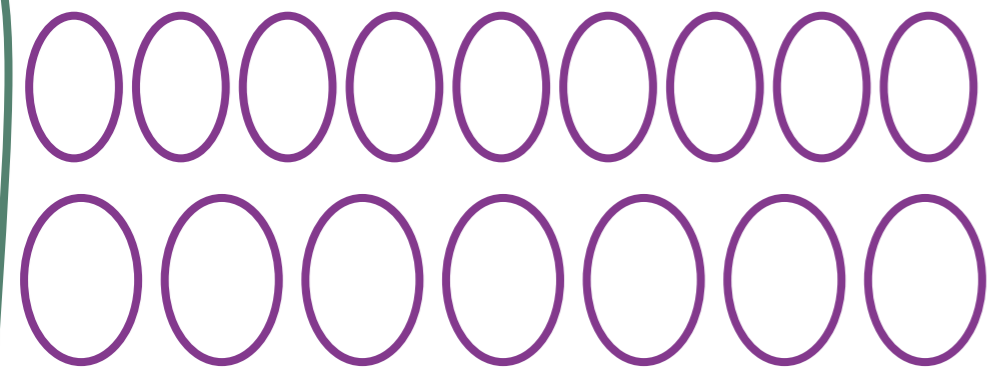
Deepen it

Draw it

bar



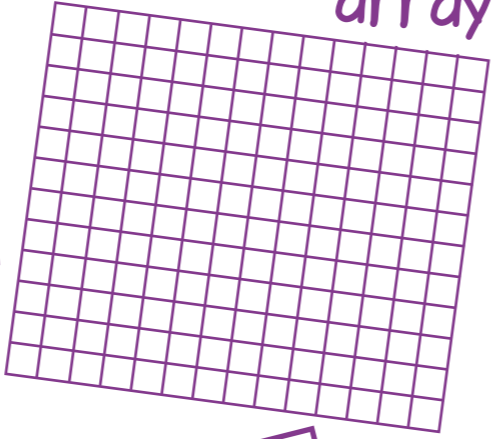
groups



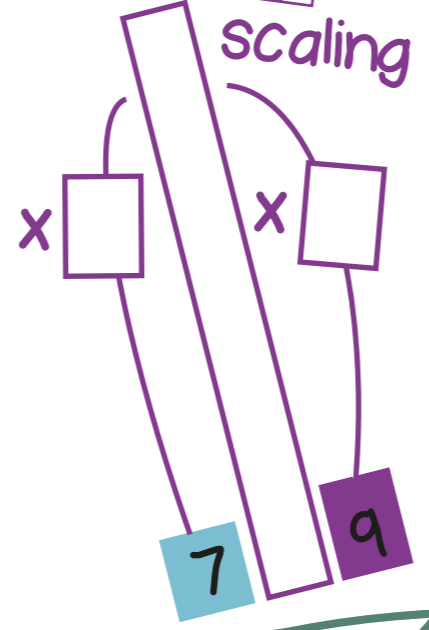
number line



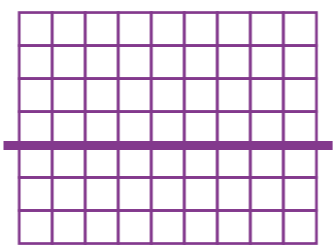
array



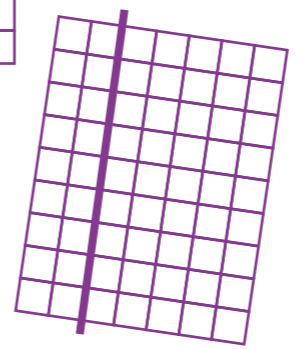
scaling



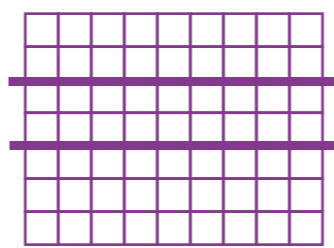
Dissect it



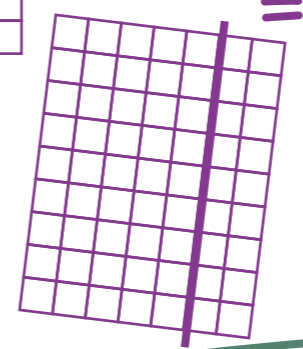
$$9 \times 7 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 7 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 7 = 9 \times \square + 9 \times \square + 9 \times \square$$
$$= \square + \square + \square$$
$$= \square$$



$$9 \times 7 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



If I know $9 \times 7 = 63$ then I also know...

- $\square \times \square = 63$
- $63 = \square \times \square$
- $63 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

- $90 = \square \div 7$
- $6300 = \square \times 70$
- $70 = \square \div 9$
- $\square \times 9 = 6300$
- $\frac{1}{9}$ of $\square = 70$



$630 \div 7 = 90$
True or false?

Diane jogs 9km **each** day for a week. How far does she jog **altogether**?

Vinnie saves £6300 in 9 months, by saving the same amount **each** month. How much does he save **each** month?

Pat swims for 90 minutes **each** day. For how many minutes does she swim in a week?

Esther pays £630 for match tickets that cost £90 **each**. How many tickets did she buy?

Derive it

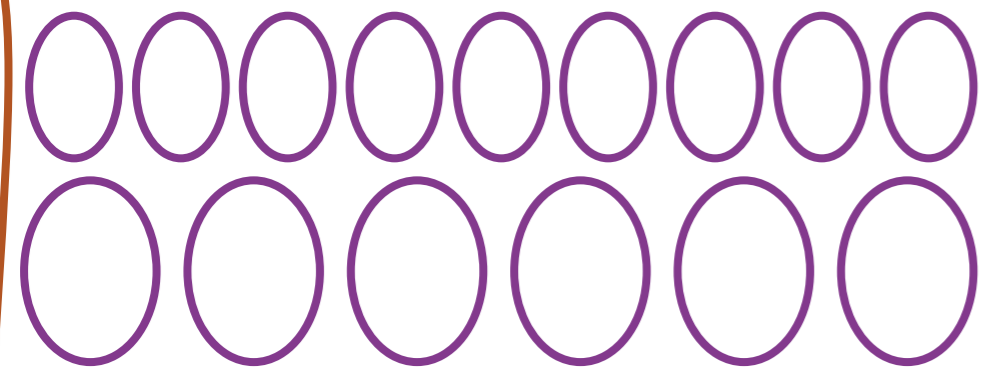
Deepen it

Draw it

bar



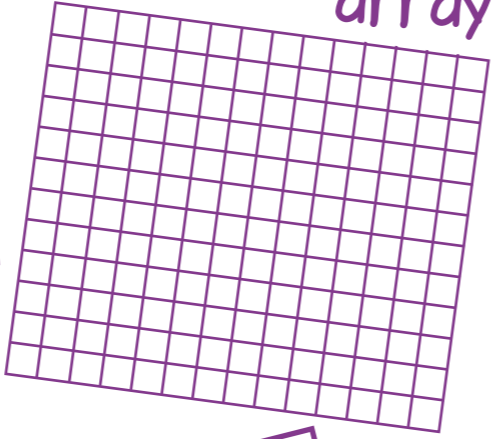
groups



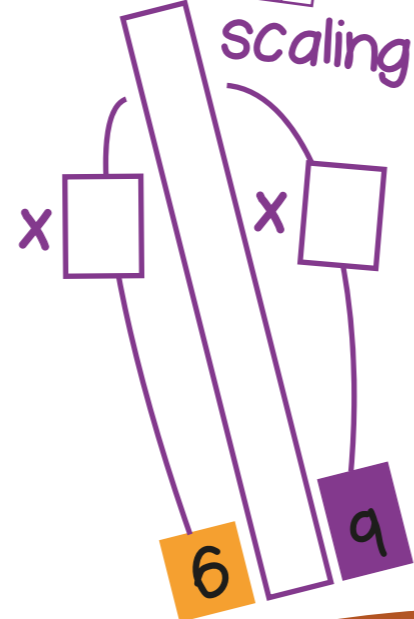
number line



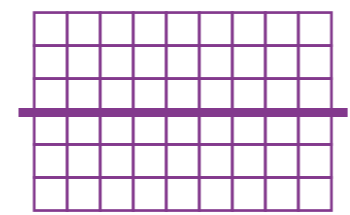
array



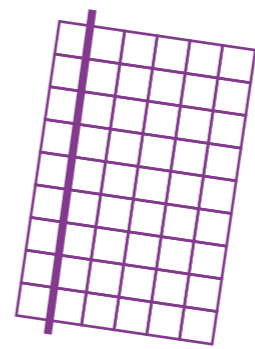
scaling



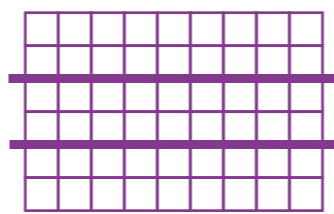
Dissect it



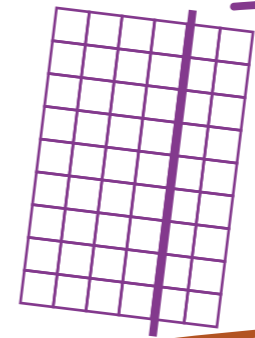
$$9 \times 6 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



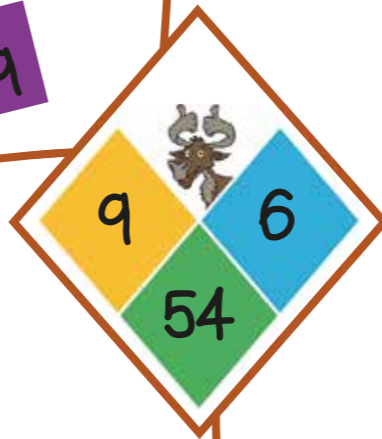
$$9 \times 6 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 6 = 9 \times \square + 9 \times \square + 9 \times \square$$
$$= \square + \square + \square$$
$$= \square$$



$$9 \times 6 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



If I know $9 \times 6 = 54$ then I also know...

- $\square \times \square = 54$
- $54 = \square \times \square$
- $54 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

Each dining chair costs £90. How much would 6 chairs cost?

- $90 = \square \div 6$
- $5400 = \square \times 60$
- $60 = \square \div 9$
- $\square \times 9 = 5400$
- $\frac{1}{9}$ of $\square = 6$

How many minutes are there in 90 hours?

The perimeter of a hexagon is 540mm. If all the sides are equal, how long is each side?

A van travels a total of 5400km in 9 equal trips. How long is each trip?



$70 \times 60 = 540$
True or false?

Derive it

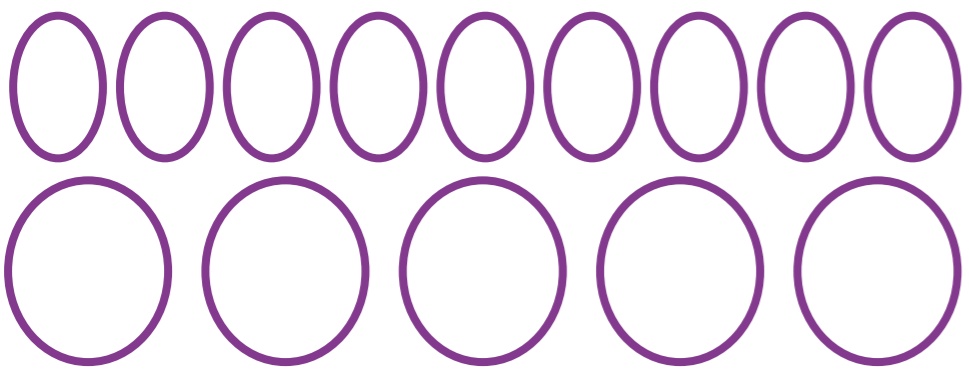
Deepen it

Draw it

bar



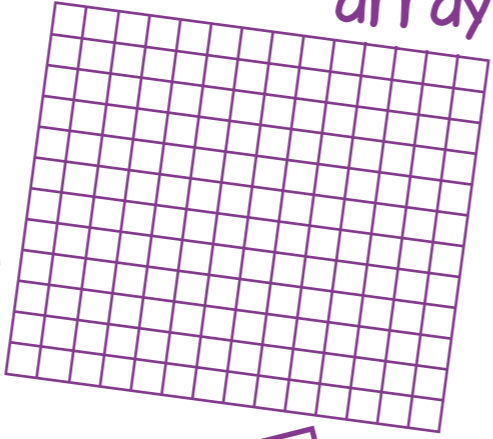
groups



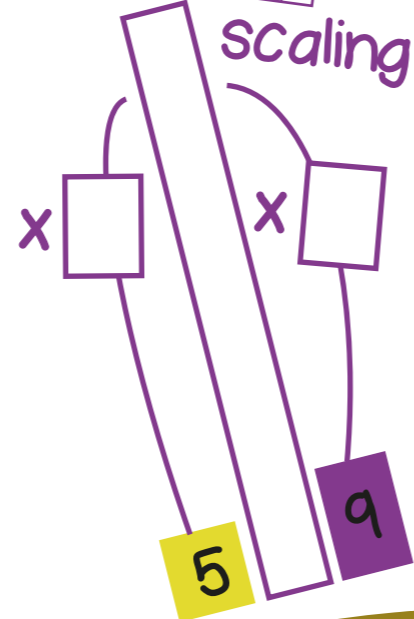
number line



array

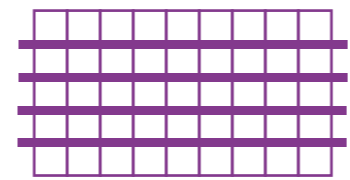


scaling

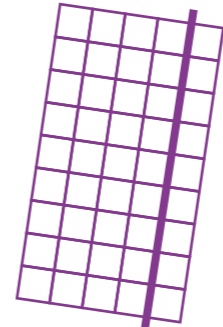


Dissect it

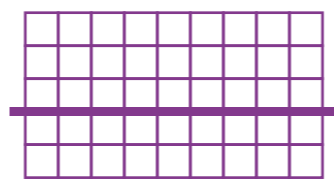
$$9 \times 5 = 9 + \square + 9 + \square + \square = \square$$



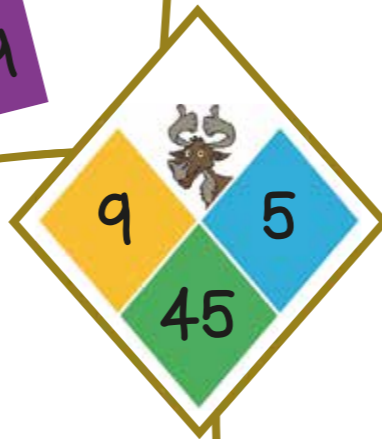
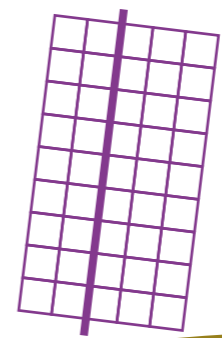
$$9 \times 5 = 9 \times \square + 9 \times \square = \square + \square = \square$$



$$9 \times 5 = 9 \times \square + 9 \times \square = \square + \square = \square$$



$$9 \times 5 = 9 \times \square + 9 \times \square = \square + \square = \square$$



If I know $9 \times 5 = 45$ then I also know...

- $\square \times \square = 45$
- $45 = \square \times \square$
- $45 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

Elin has nine 50p coins. How much money does she have **in total**?

- $90 = \square \div 5$
- $4500 = \square \times 50$
- $50 = \square \div 9$
- $\square \times 9 = 4500$
- $\frac{1}{9}$ of $\square = 50$

If **each** side of a pentagon is 90mm, what is the perimeter of the pentagon?

How many times can a 5 litre bucket be filled from a 450 litre barrel of water?

A carpenter earns £50 for each box he makes. How many boxes must be made to earn £4500?



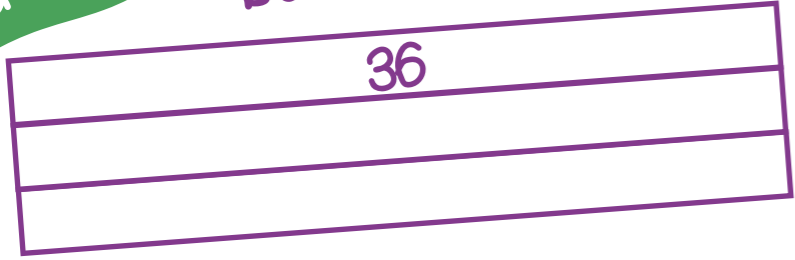
True or false?
 $9 \times 5 = \text{half of } 9 \times 10$

Derive it

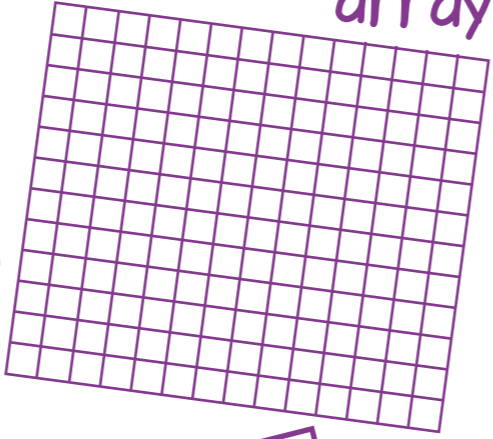
Deepen it

Draw it

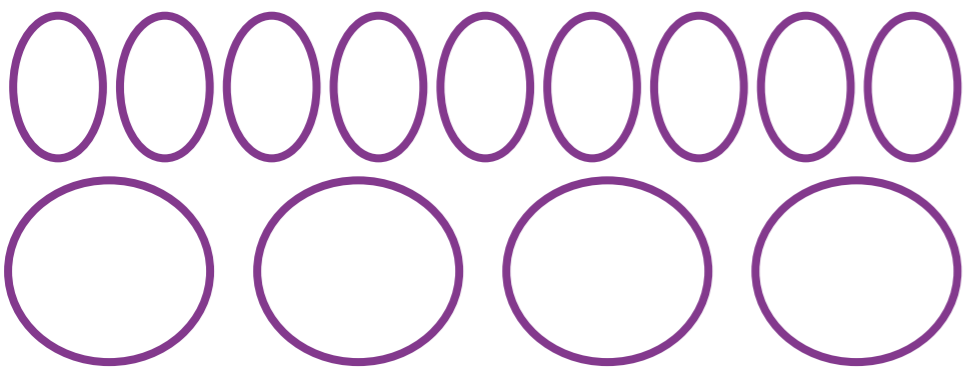
bar



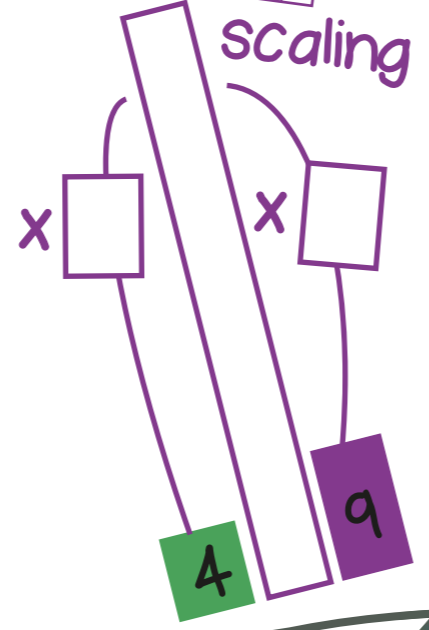
array



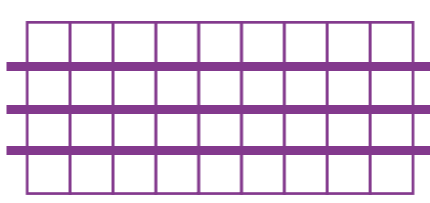
groups



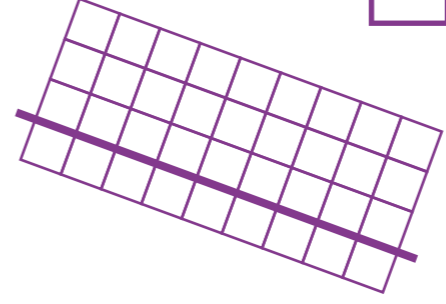
number line



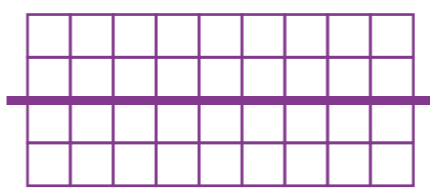
Dissect it



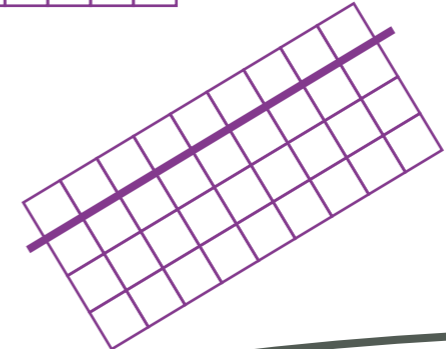
$$9 \times 4 = 9 + \square + 9 + \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 4 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 4 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



$$9 \times 4 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$



If I know $9 \times 4 = 36$ then I also know...

$$\square \times \square = 36$$
$$36 = \square \times \square$$
$$36 = \square \times \square$$
$$\square \div \square = \square$$
$$\square = \square \div \square$$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___

There are 90 sheep in a flock. How many sheep's legs are there?

$$90 = \square \div 4$$
$$360 = \square \times 40$$
$$4 = \square \div 90$$
$$\square \times 9 = 3600$$
$$\frac{1}{9} \text{ of } \square = 40$$

A square has 4 right angles. How many degrees is that in total?

9 builders split their £3600 earnings equally. How much do they earn each?

Fred plays football for the same amount of time each day for 9 days. He plays for 360 minutes in total. How long does he play each day?



True or false?

$$9 \times 4 = 4 + 4 + 4 + 4$$

Derive it

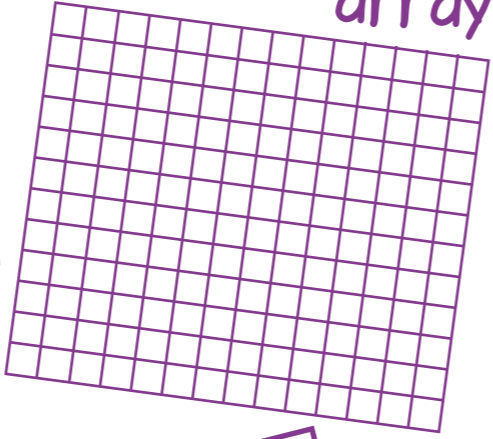
Deepen it

Draw it

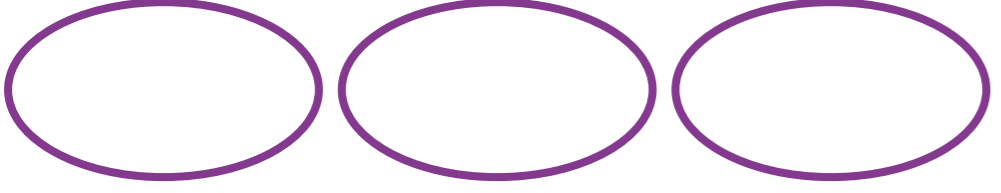
bar



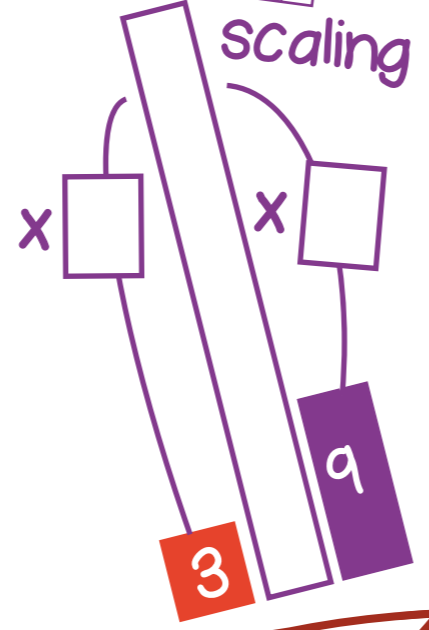
array



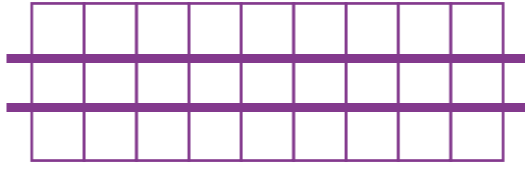
groups



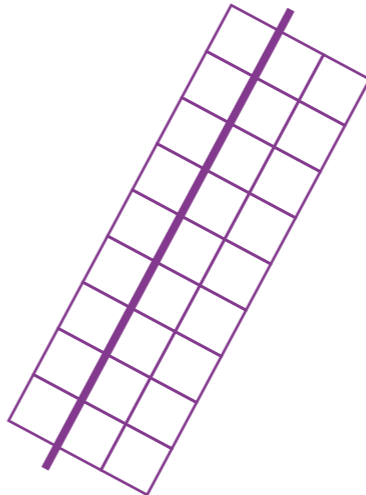
number line



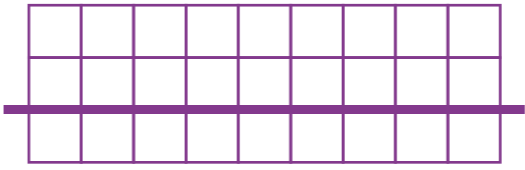
Dissect it



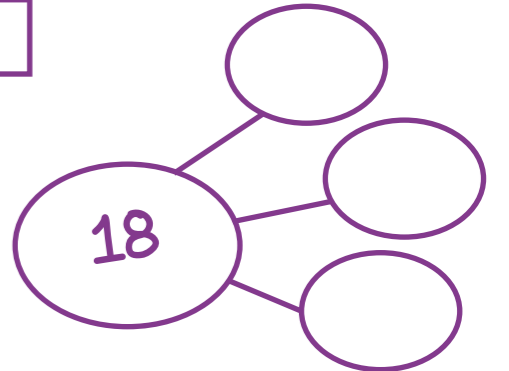
$$9 \times 3 = 9 + \square + \square = \square$$



$$9 \times 3 = 9 \times \square + 9 \times \square = \square + \square = \square$$



$$9 \times 3 = 9 \times \square + 9 \times \square = \square + \square = \square$$



If I know $9 \times 3 = 27$ then I also know...

- $\square \times \square = 27$
- $27 = \square \times \square$
- $27 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___



- $90 = \square \div 3$
- $2700 = \square \times 300$
- $3 = \square \div 90$
- $\square \times 9 = 270$
- $\frac{1}{9}$ of $\square = 30$



$270 \div 90 = 30$
True or false?

Each side of a triangle is 90mm. What is the perimeter of the triangle?

A class of 30 children go on a school trip. The total cost is £270. How much does it cost each child?

If you turn through three right angles, how many degrees have you turned through altogether?

9 musicians equally share the £2700 they earned. How much do they receive each?

Derive it

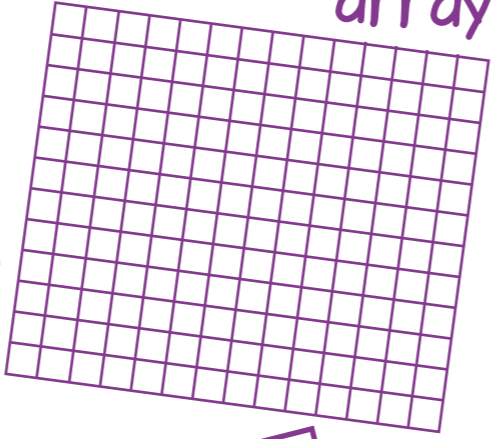
Deepen it

Draw it

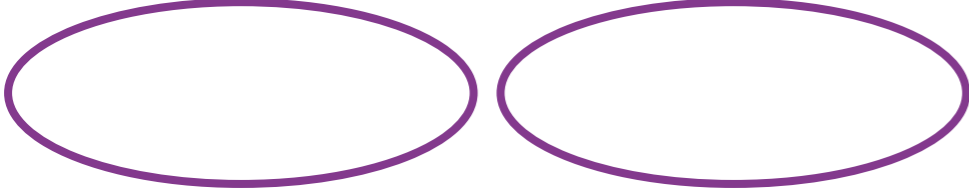
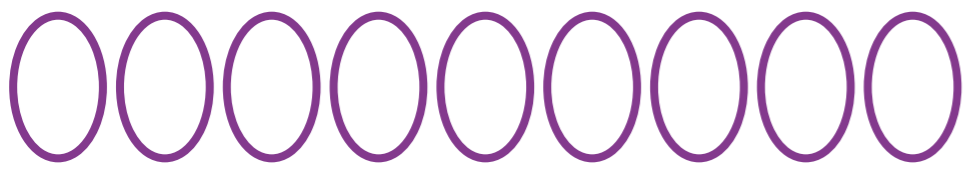
bar



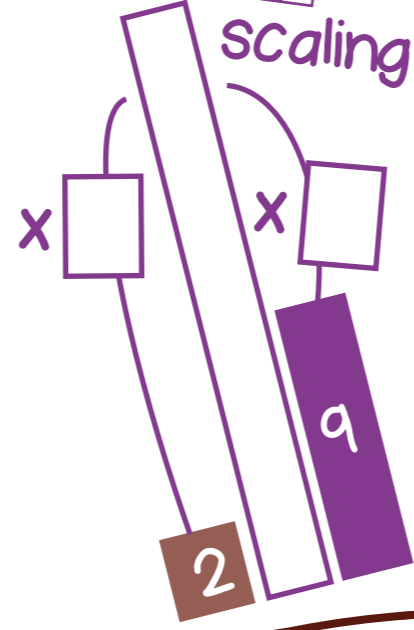
array



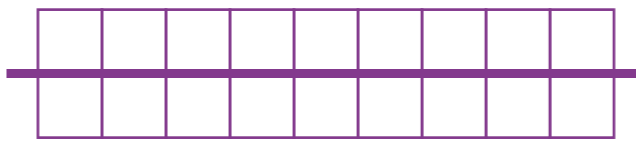
groups



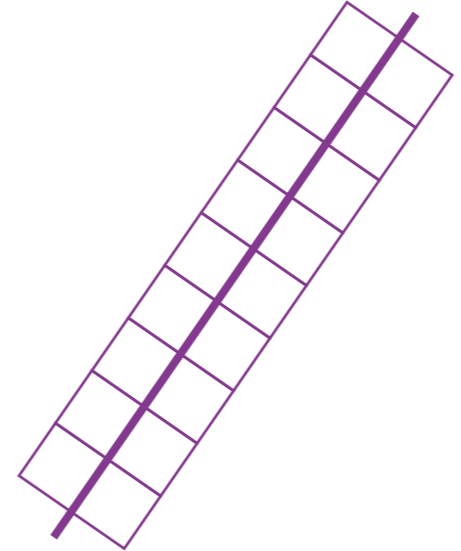
number line



Dissect it

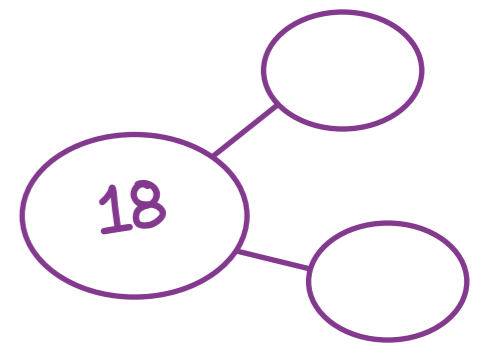
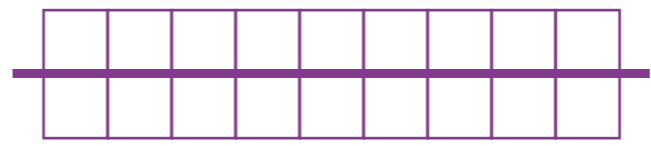


$$9 \times 2 = 9 + \square$$
$$= \square$$



$$9 \times 2 = 9 \times \square + 9 \times \square$$
$$= \square + \square$$
$$= \square$$

$$\text{Double } 9 = \square$$



If I know $9 \times 2 = 18$ then I also know...

- $\square \times \square = 18$
- $18 = \square \times \square$
- $18 = \square \times \square$
- $\square \div \square = \square$
- $\square = \square \div \square$

- ___ multiplied by ___ is ___
- ___ groups of ___ is ___
- ___ shared equally between 9 is ___ each
- ___ put into groups of 9 is ___ groups of 9
- ___ and ___ are factors of ___
- ___ is a multiple of ___ and ___



- $90 = \square \div 2$
- $180 = \square \times 20$
- $2 = \square \div 90$
- $\square \times 9 = 1800$
- $\frac{1}{9}$ of $\square = 20$



$180 \div 9 = 20$
True or false?

Norman has collected ninety £2 coins. How much money is that?

Sacks of dog food weigh 20kg each. A store contains 1800kg of food. How many sacks are there in total?

How many degrees are there in two right angles?

Each child's jacket is decorated with 20 buttons. If 180 buttons have been used, how many jackets have been decorated?

Derive it

Deepen it