

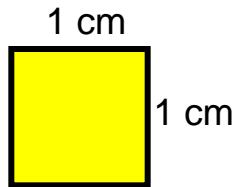
- To calculate areas of rectangles
- To calculate areas of polygons made of rectangles

Area of a Rectangle

What is area measured in?

- * Area is measured in SQUARE CENTIMETRES.
- * A square centimetre is a square in which all the sides measure 1 cm.
- * Area is also measured in SQUARE METRES.
- * A square metre is a square in which all the sides measure 1 metre.

Area is the measure of how much space a shape takes up. We measure it in squares such as square centimetres or metres etc.



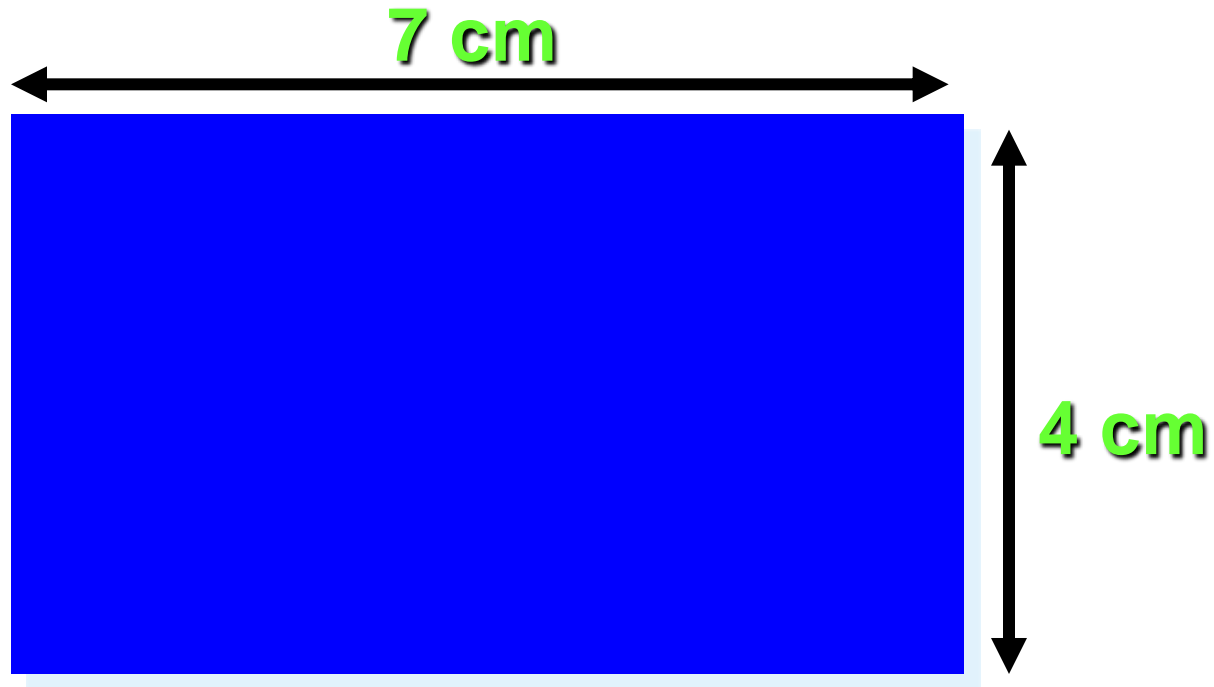
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

This rectangle takes up 28 squares.

It has an area of 28 square centimetres

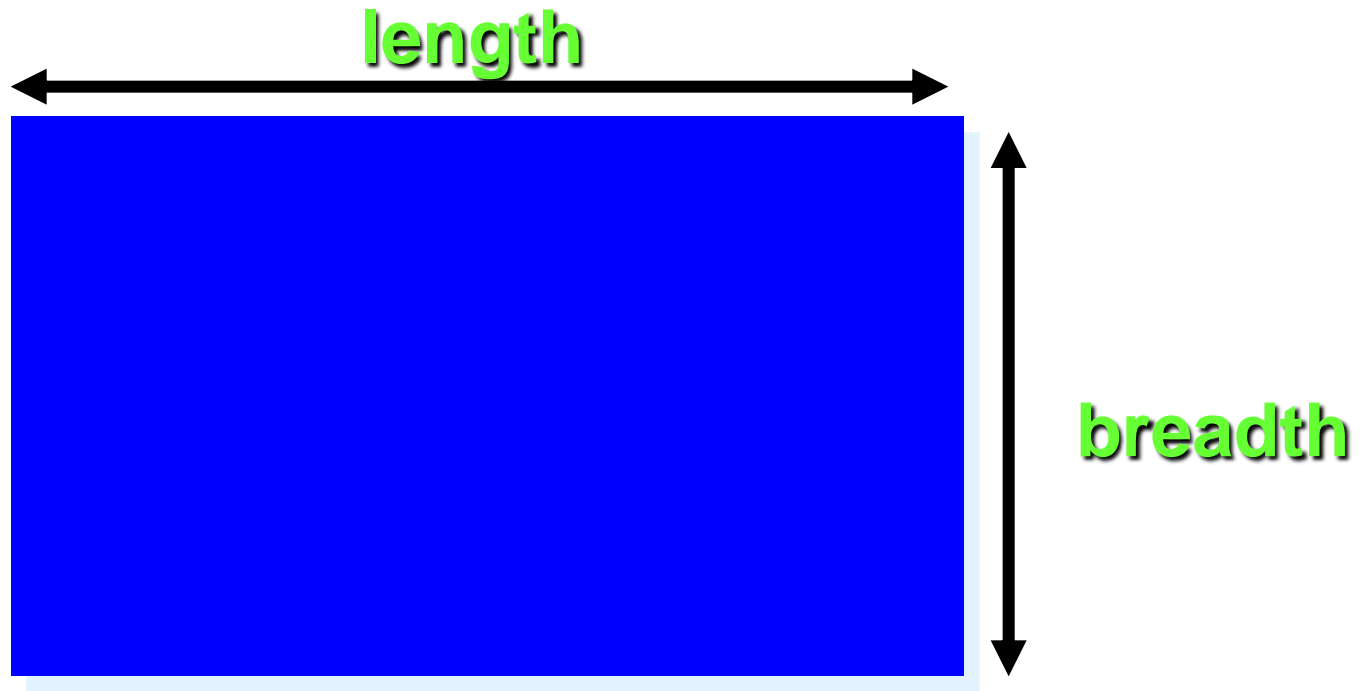
28 cm²

It could take a long time to cover shapes in squares. Luckily there is an quicker way.



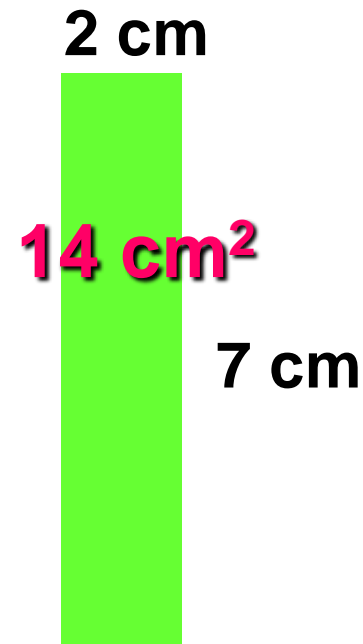
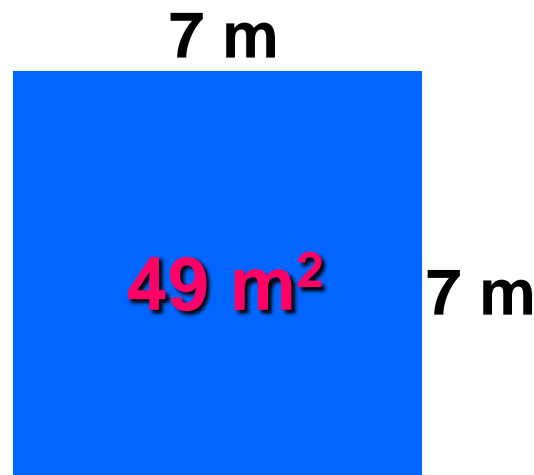
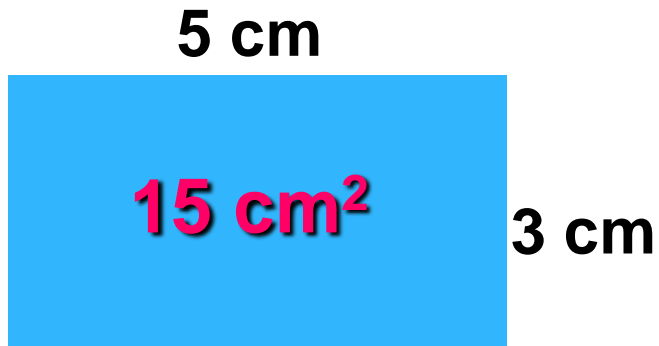
$$\times = 28 \text{ cm}^2$$

Use this formulae to find the area of rectangles.

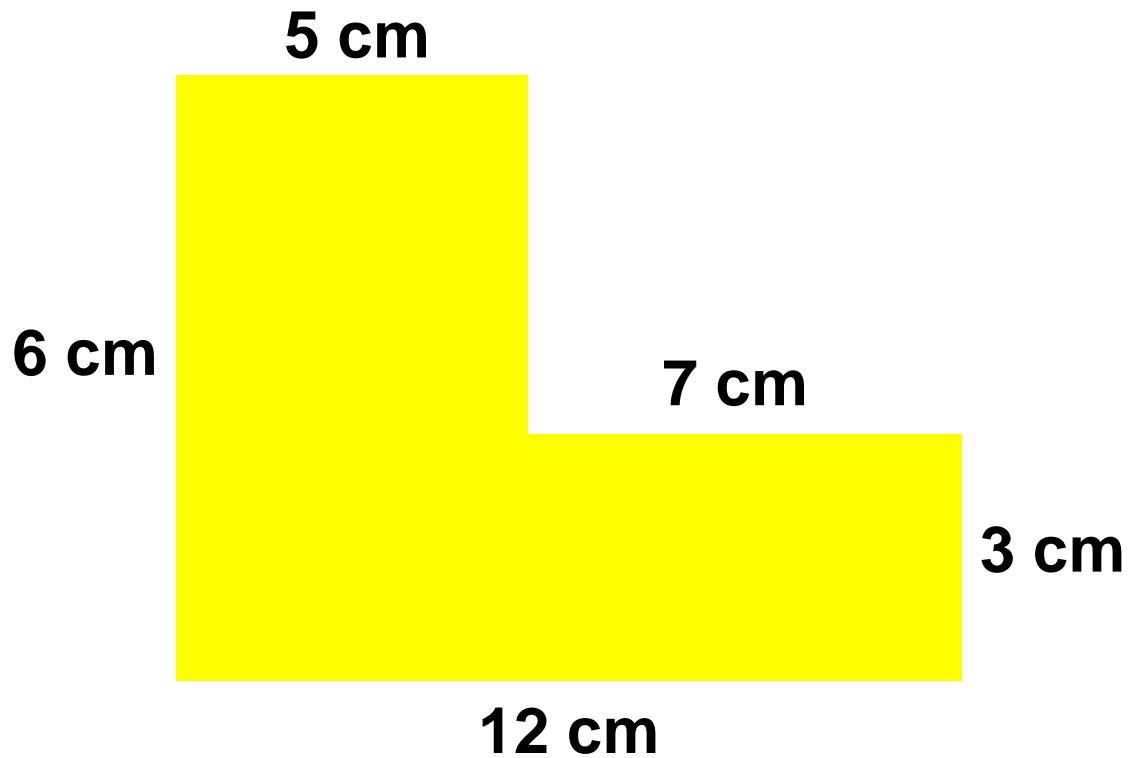


Area of a rectangle = length \times breadth

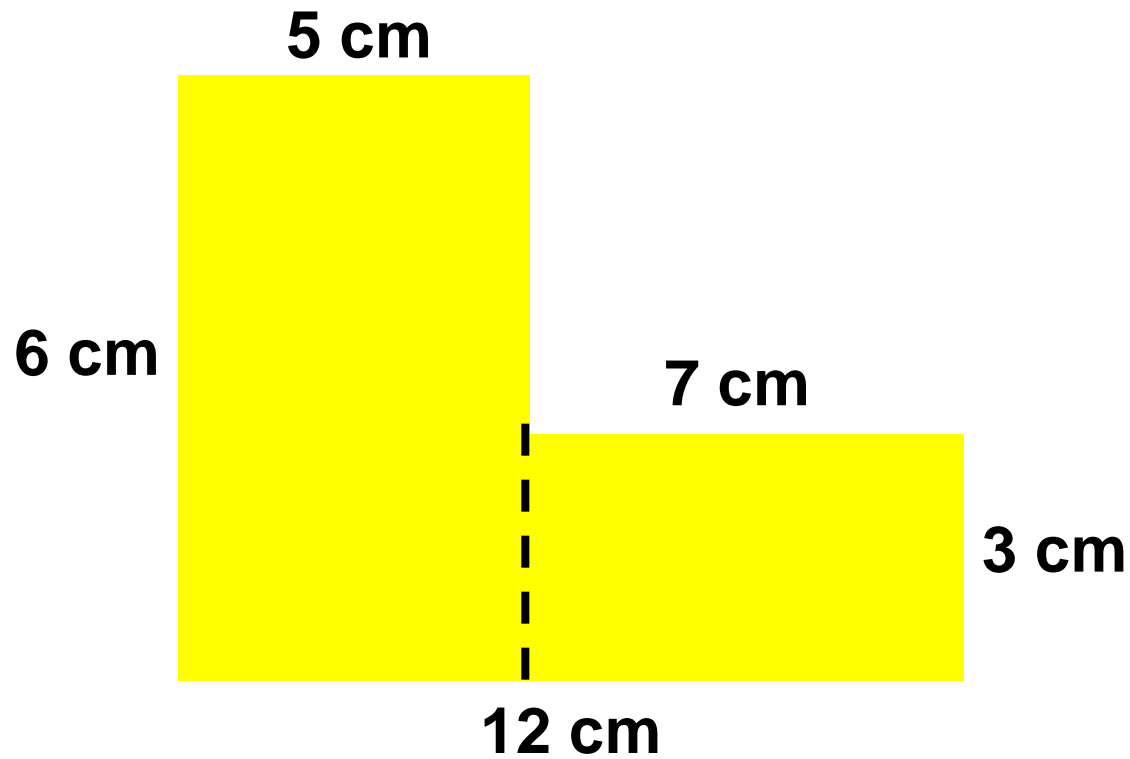
Can you find the areas of these rectangles?



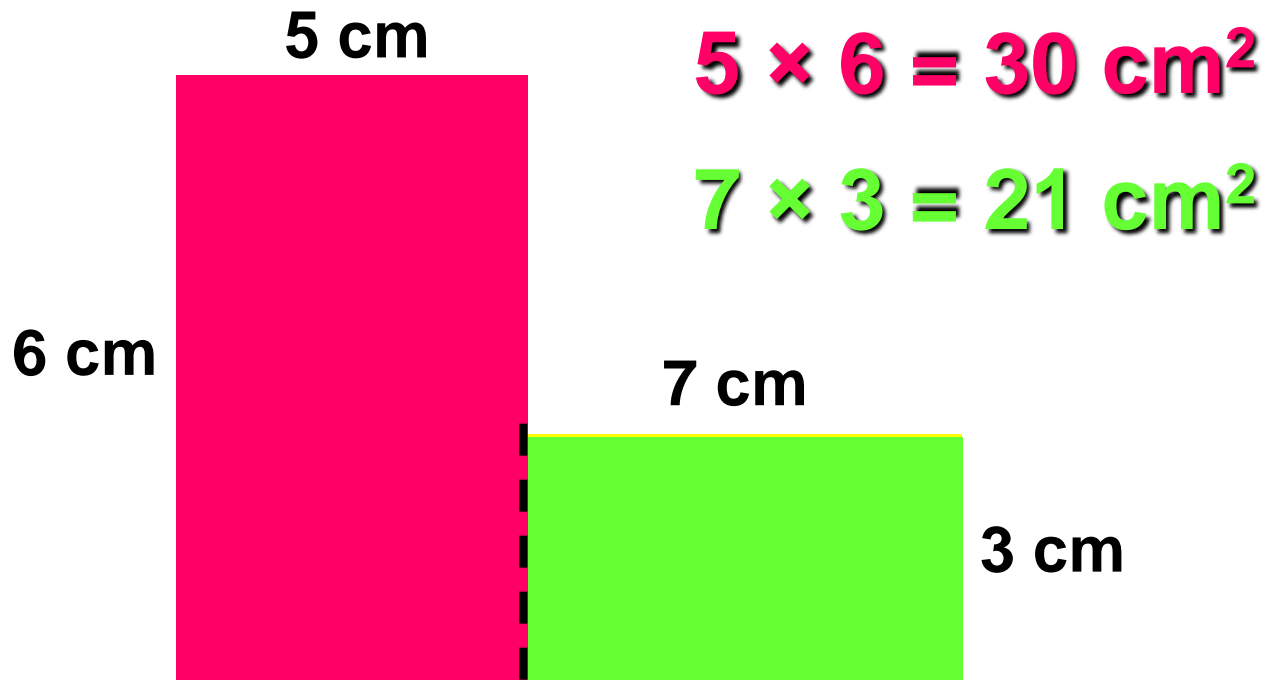
Can you think of a way to find the area of this shape?



Split the shape into rectangles?

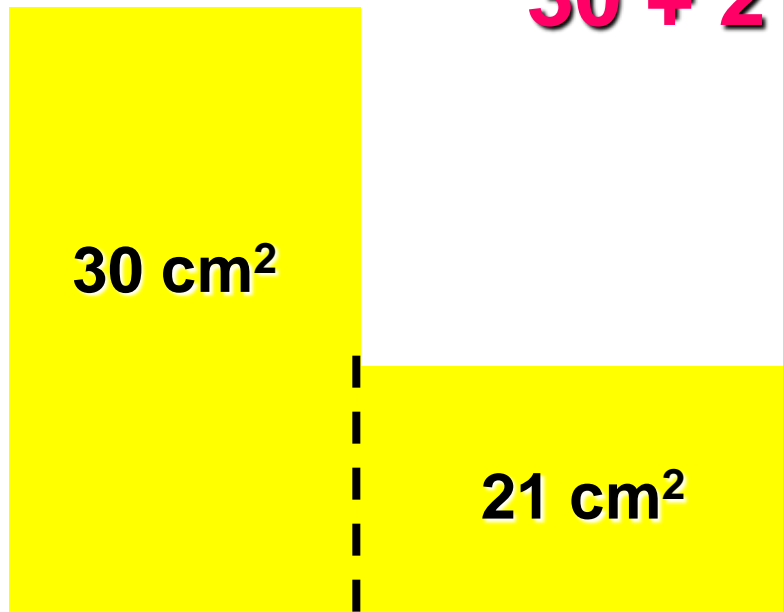


Find the area of each rectangle?

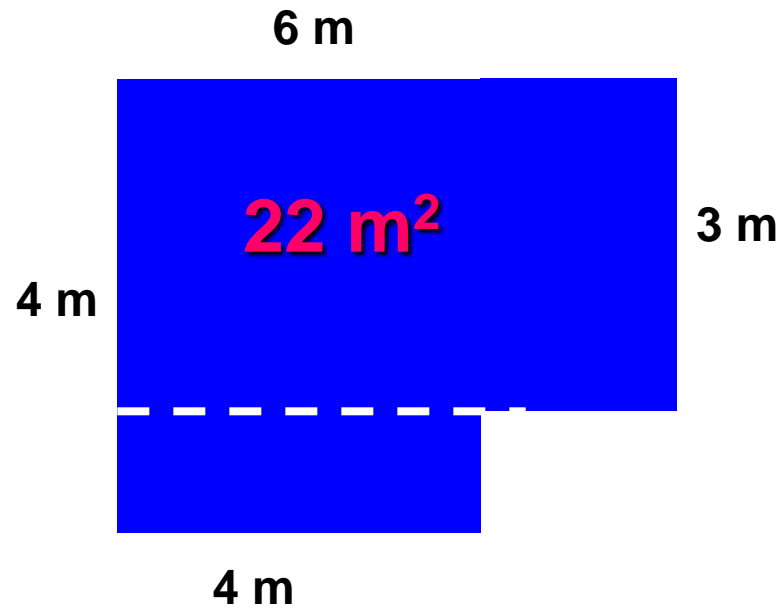
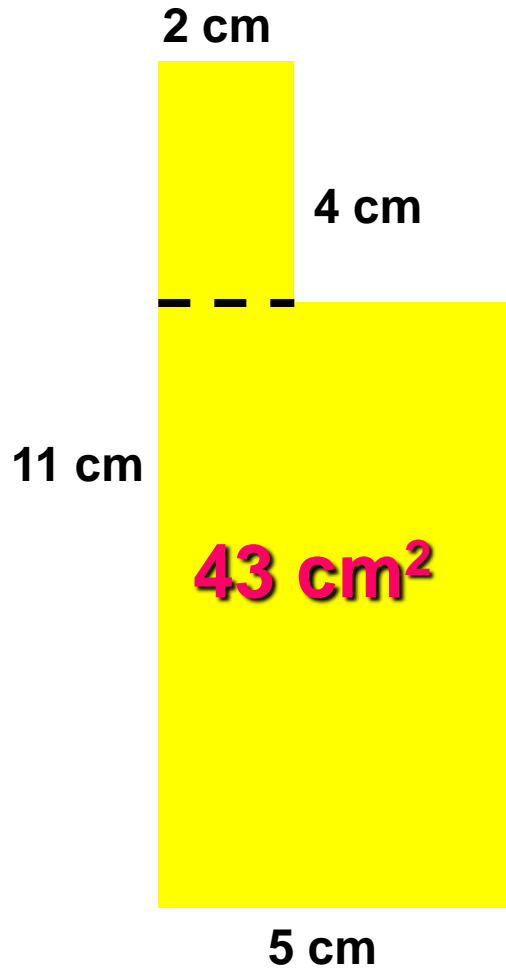


Add the areas together to find the area of the complete shape?

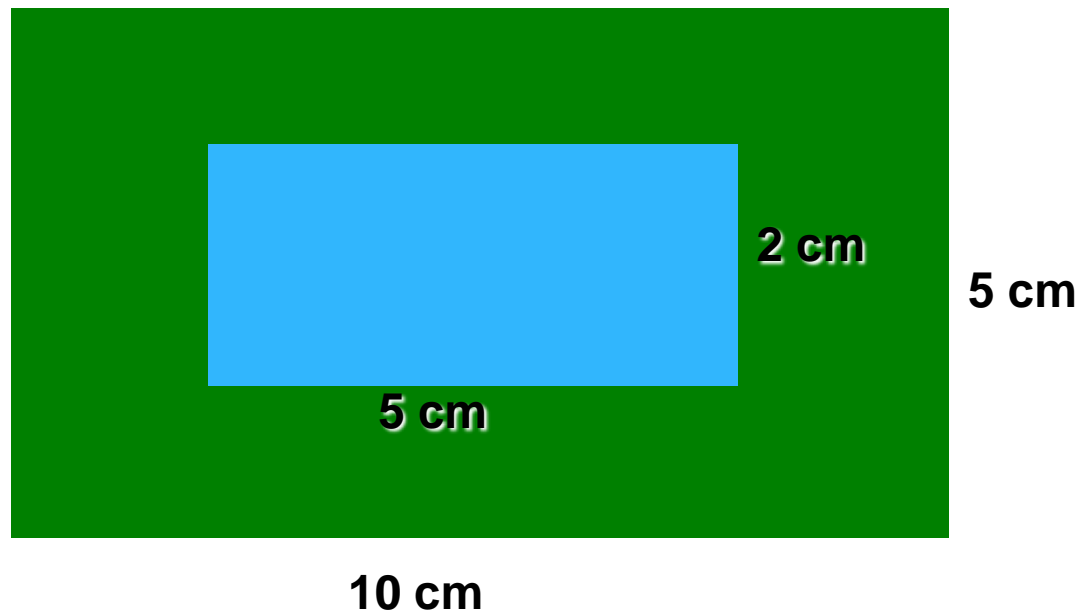
$$30 + 21 = 51 \text{ cm}^2$$



Can you find the areas of these shapes?



Here is a challenge can you work out the area of this shape with a hole in it?

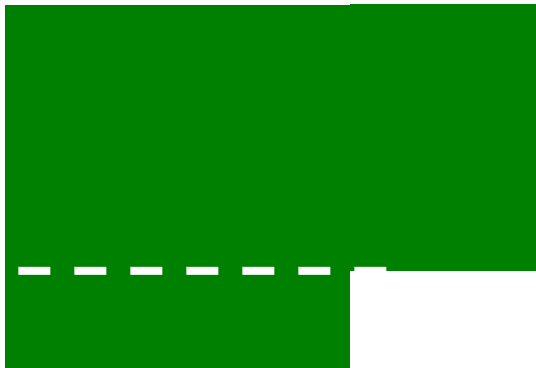
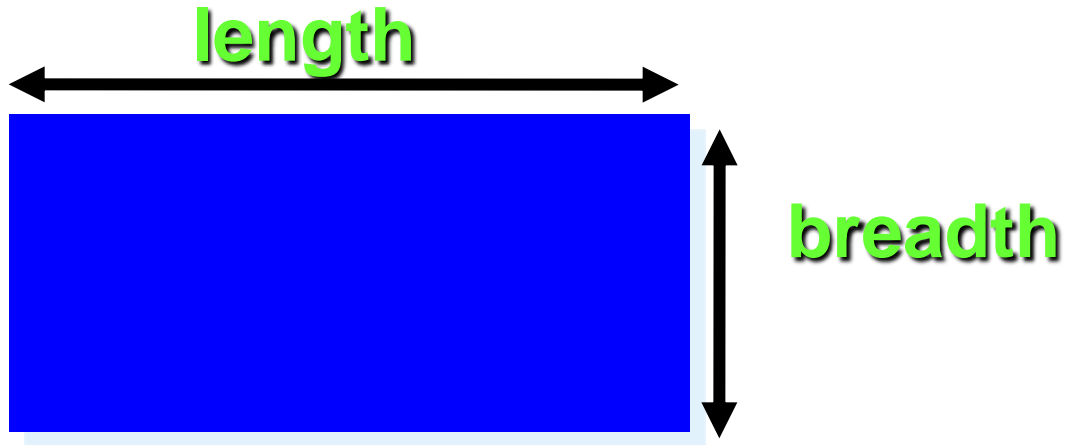


Clue: Take the area of the hole from the area of the whole!

$$50 \text{ cm}^2 - 10 \text{ cm}^2 = 40 \text{ cm}^2$$

Remember:

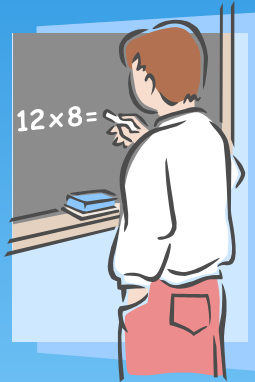
Area of a rectangle = length \times breadth



Split more complicated shapes into rectangles and find the area of each rectangle then add them together.

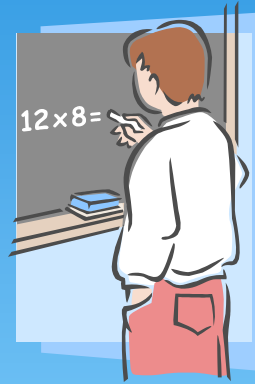
Over to you.

OMA



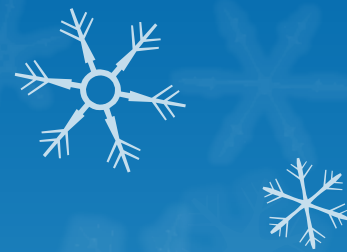
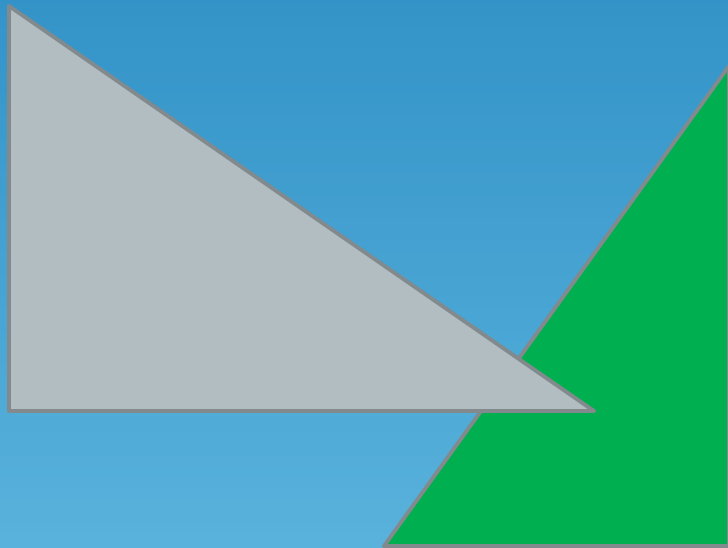
Find Fractions of a number

Learning Objective



- Calculate the area of a right angled triangle by considering it half a rectangle

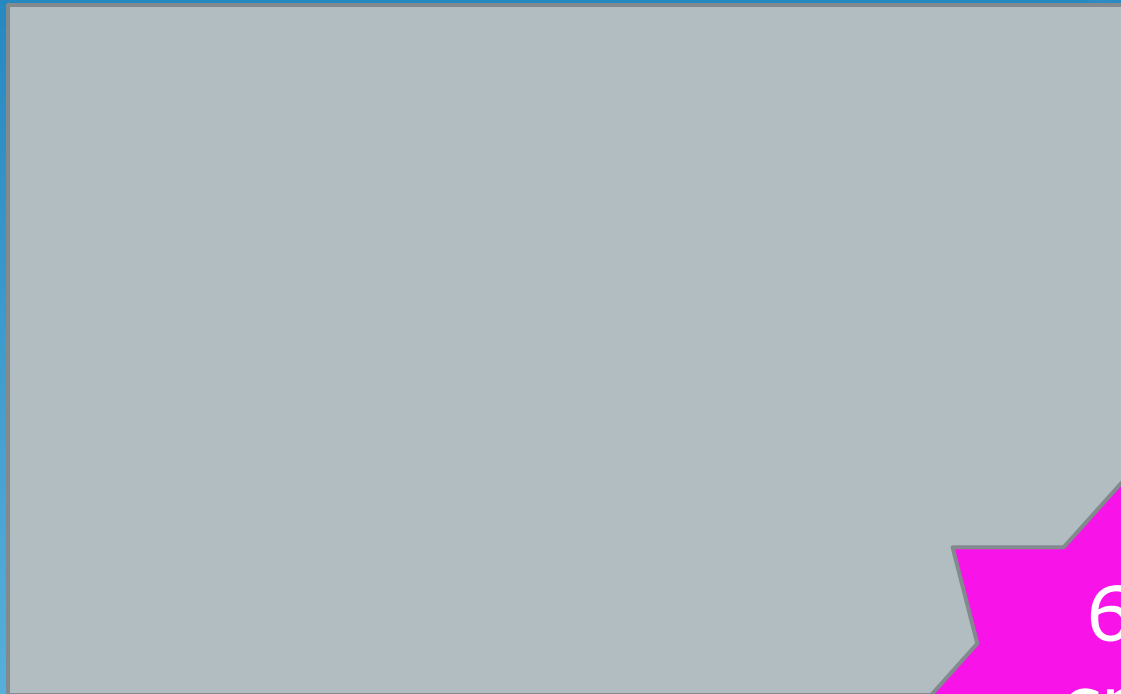
Area of triangles



What's the area of this rectangle?

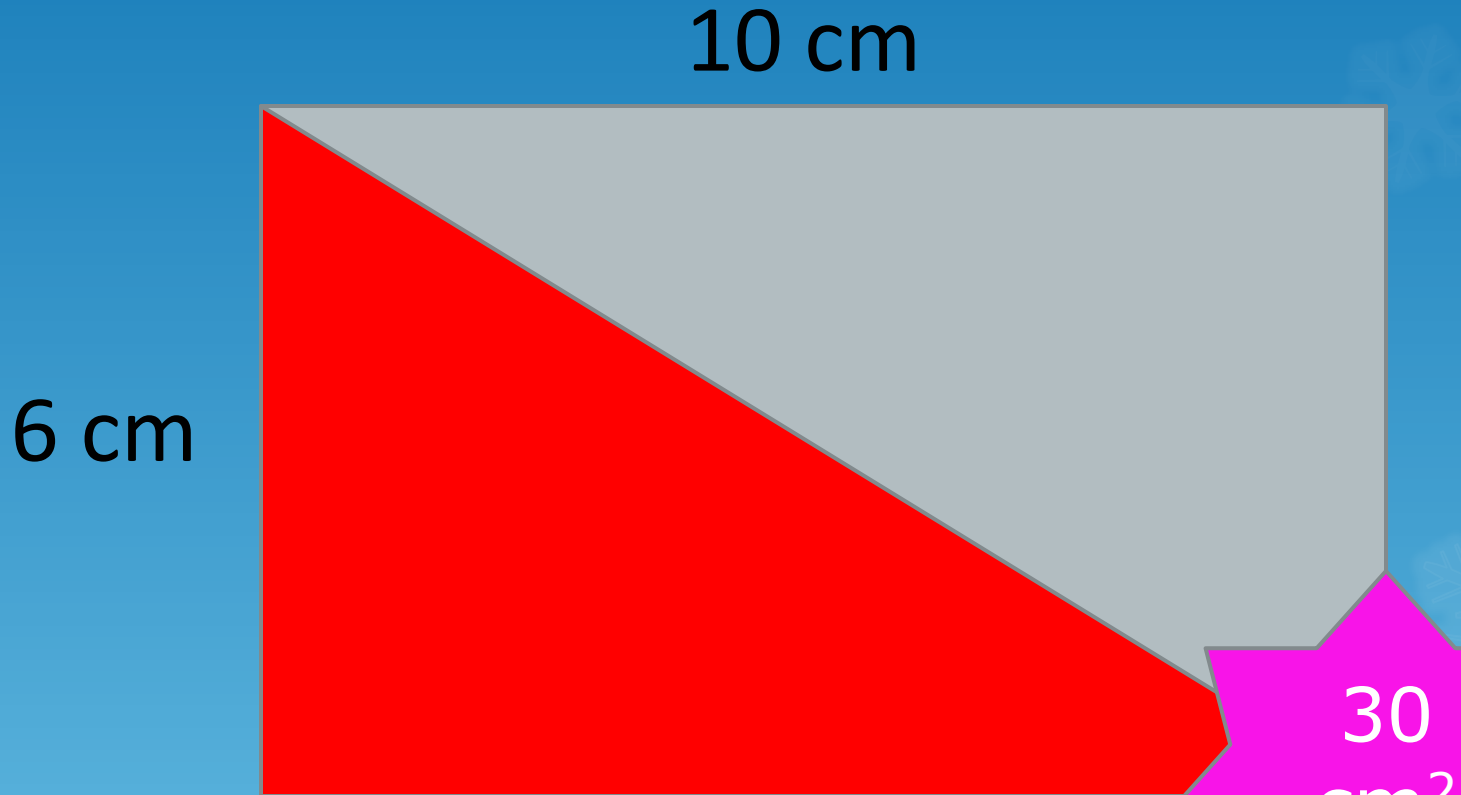
10 cm

6 cm



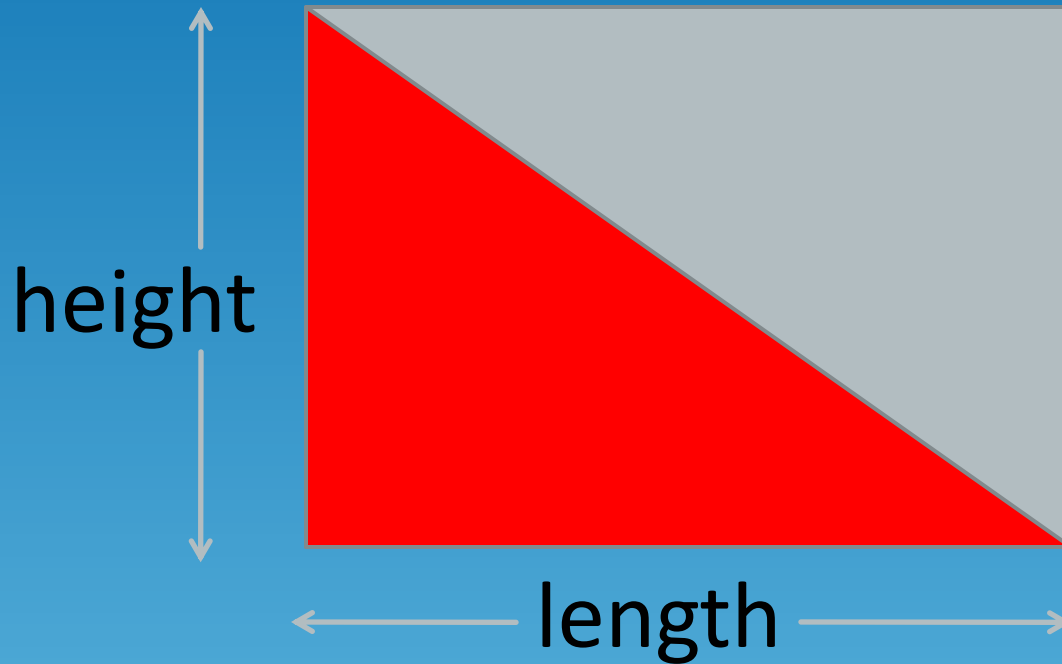
60
cm²

What's the area of the red triangle?



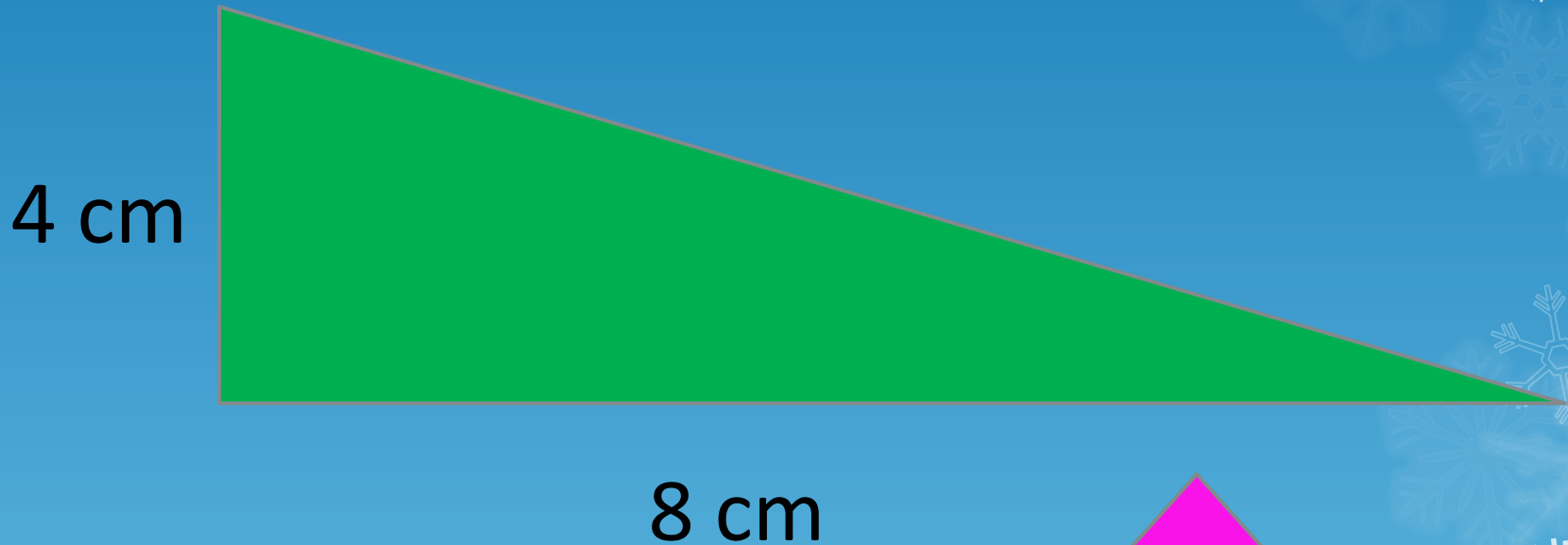
30
cm²

Area of a triangle



$$\text{Area} = \frac{1}{2} \text{ length} \times \text{height}$$

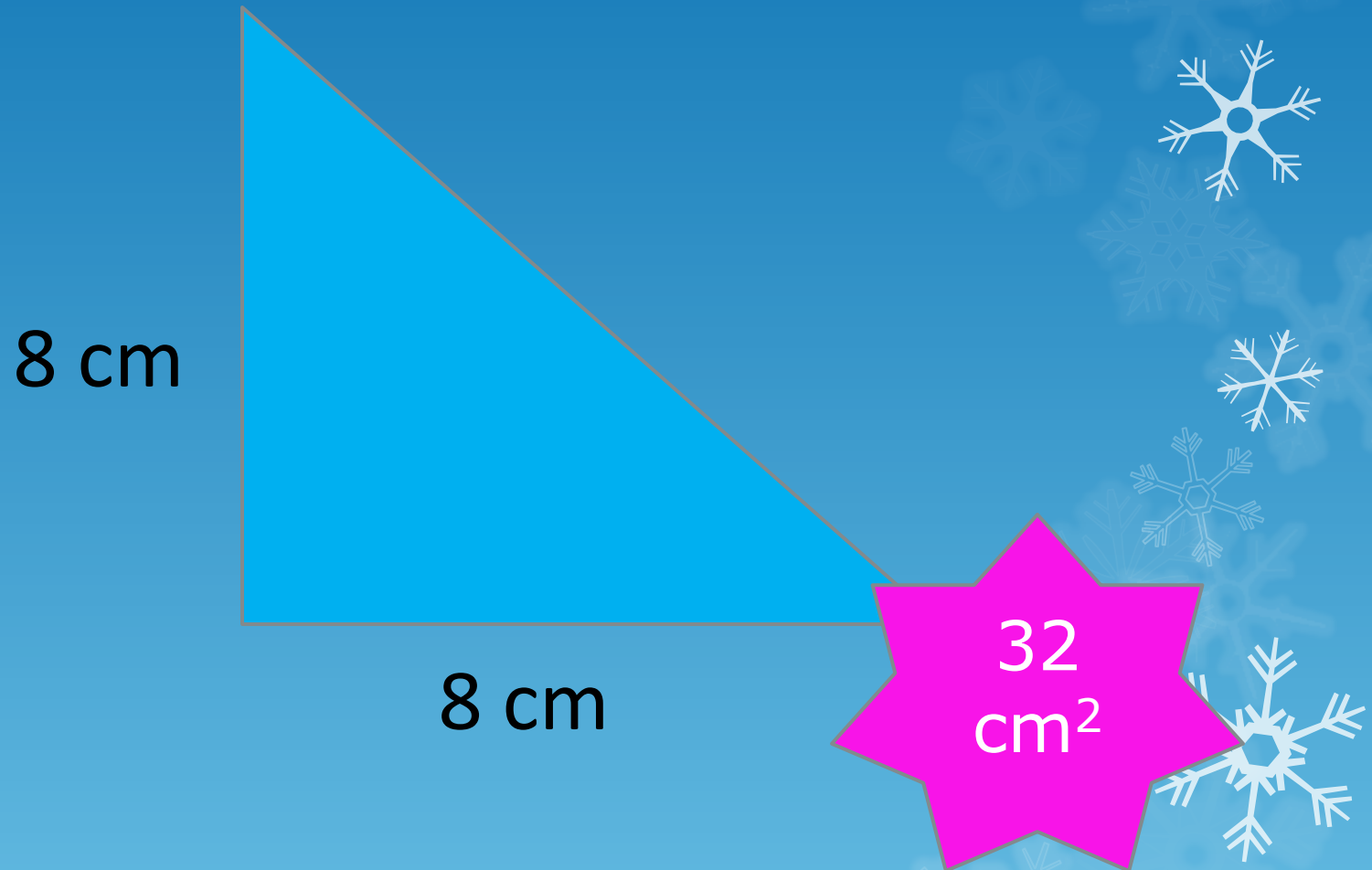
What's the area?



$$\frac{1}{2} \text{ of } 8 \times 4 =$$

16
cm²

What's the area?



What's the area?

8 cm

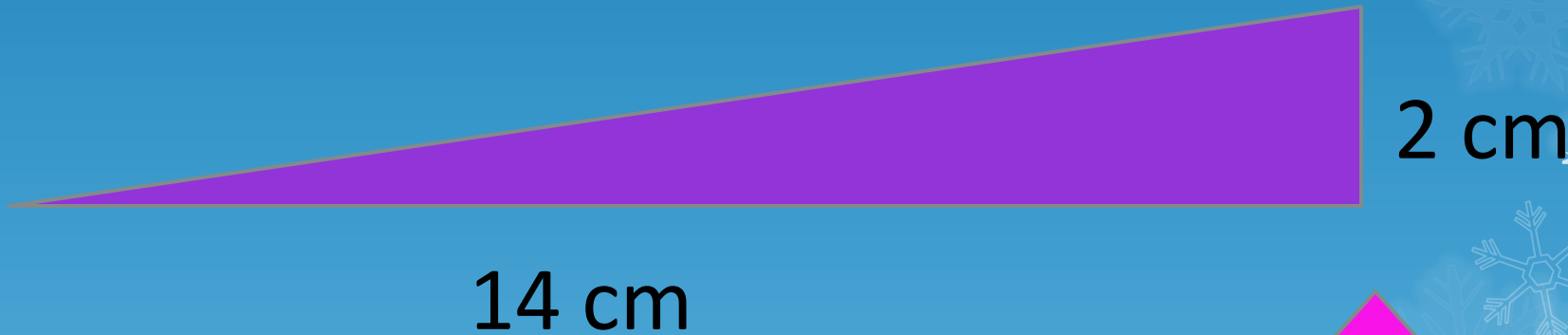


3 cm

12
cm²

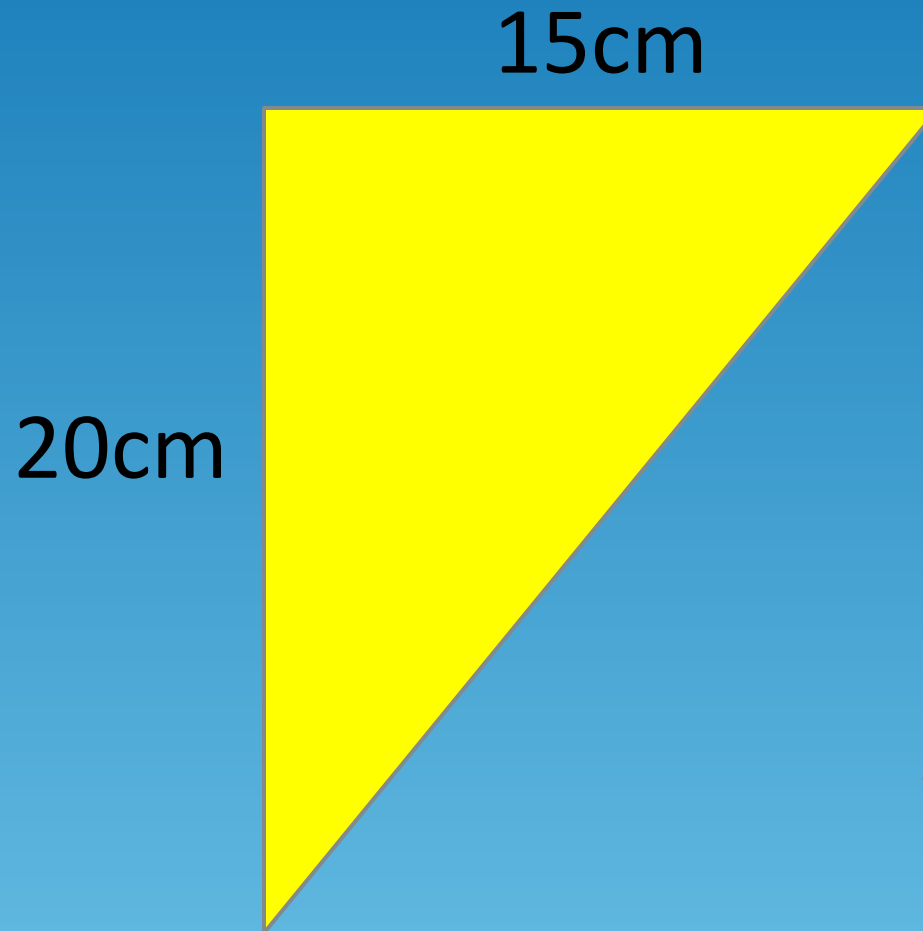


What's the area?



14
cm²

What's the area?



150
cm²

What's the area?

20 cm



8 cm

80
cm²



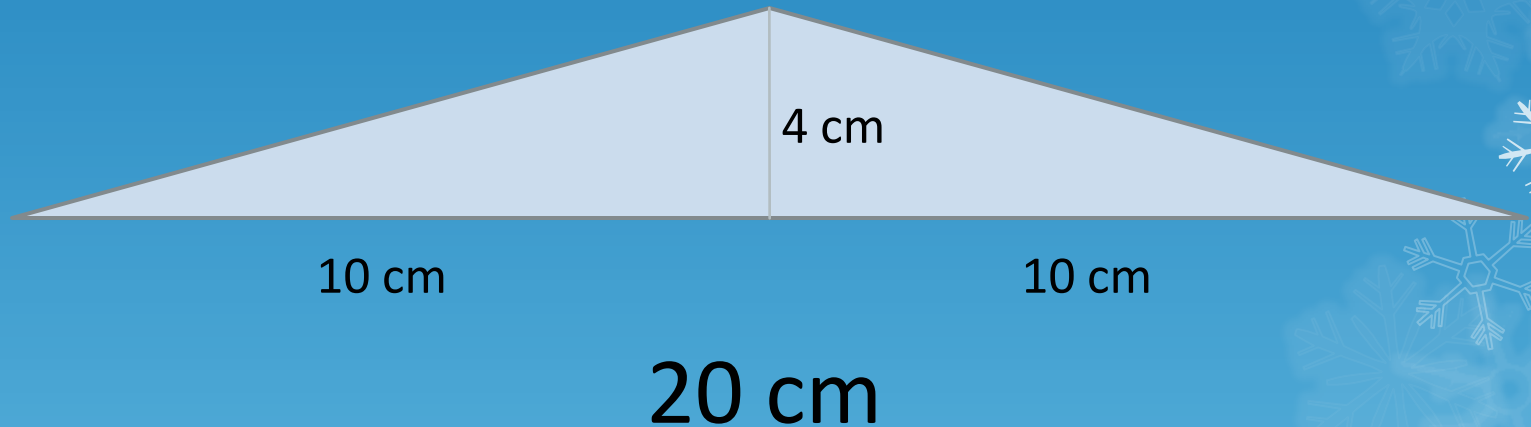
What if the
triangle doesn't
have a right
angle?



Split it up!



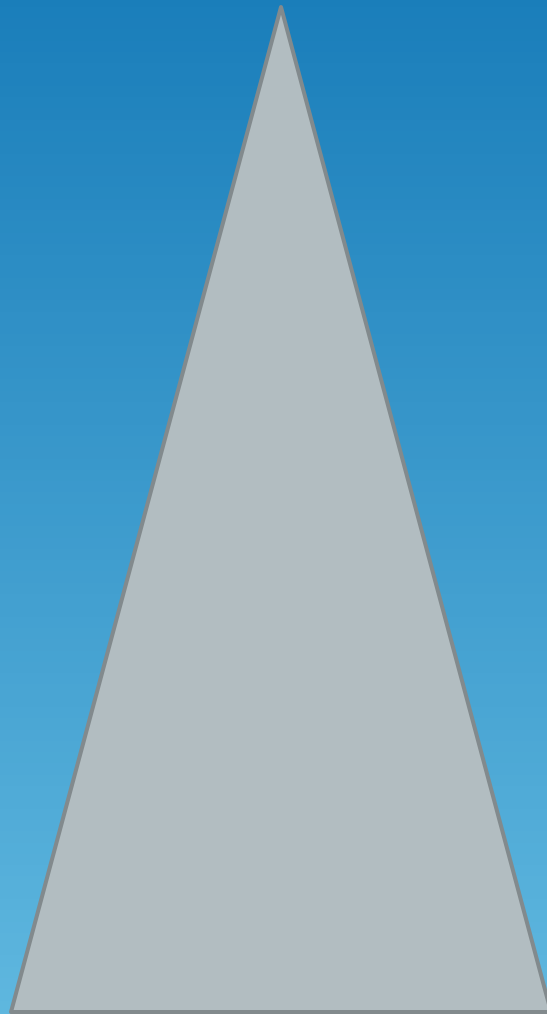
Split it up!



$$(\frac{1}{2} \text{ of } 10 \times 4) + (\frac{1}{2} \text{ of } 10 \times 4) = 20 + 20 = 40$$

$$\frac{1}{2} \text{ of } 20 \times 4 = 40$$

What's the area?



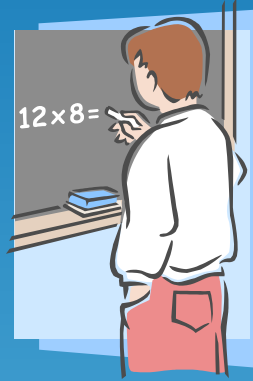
10 cm

8 cm



40
cm²

OMA



Find Fractions of a number

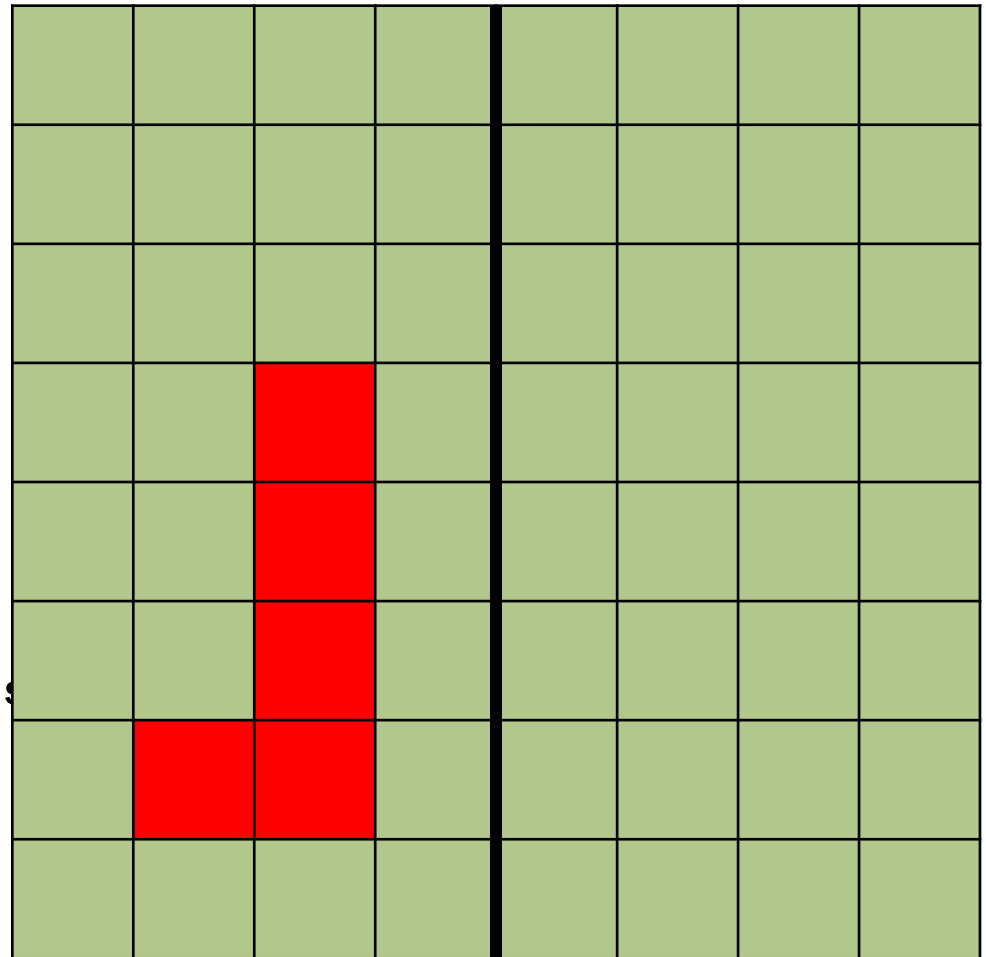
BRAIN TRAIN

LO: TO RECOGNISE AND
DRAW REFLECTIONS OF
SHAPES.

SHAPE 1

Look at this shape.

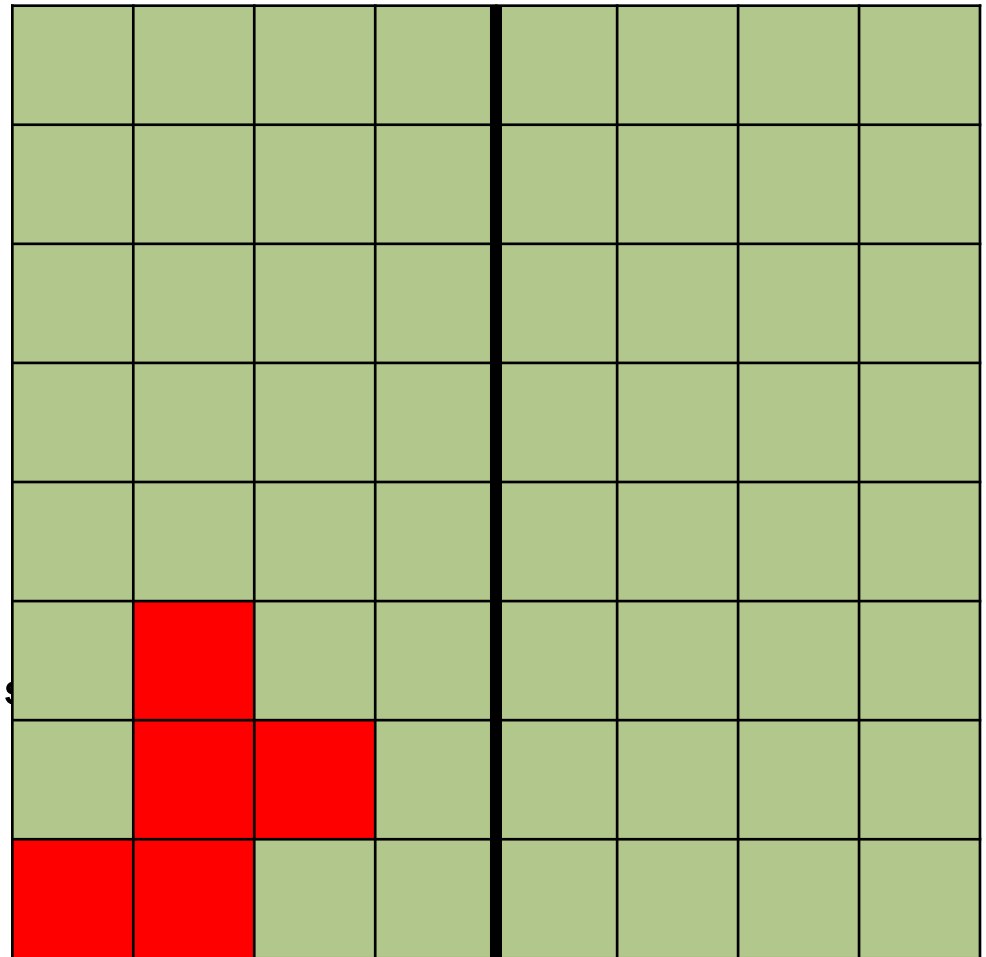
Can you spot the vertical reflection of the shape when asked.



SHAPE 2

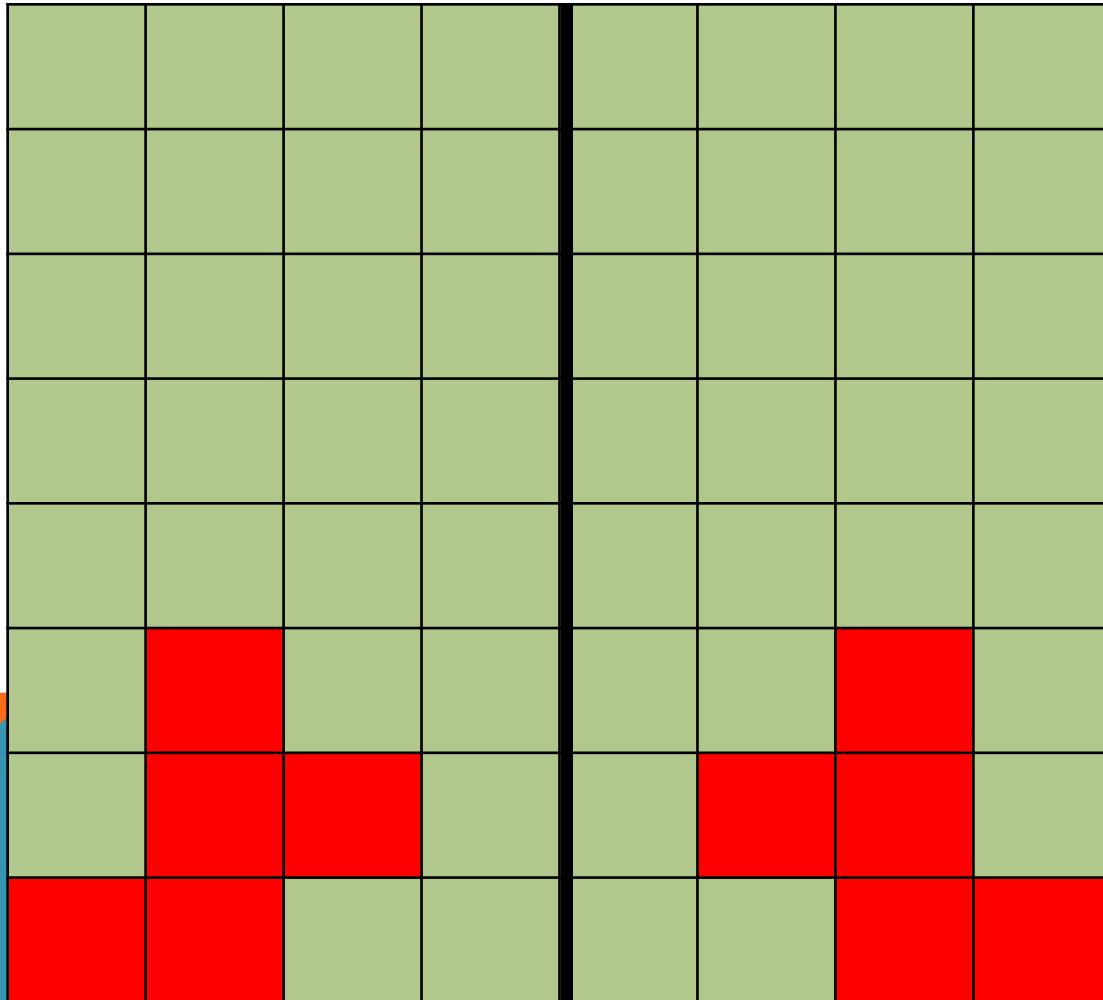
Look at this shape.

Can you spot the vertical reflection of the shape when asked.



CONGRATULATIONS!

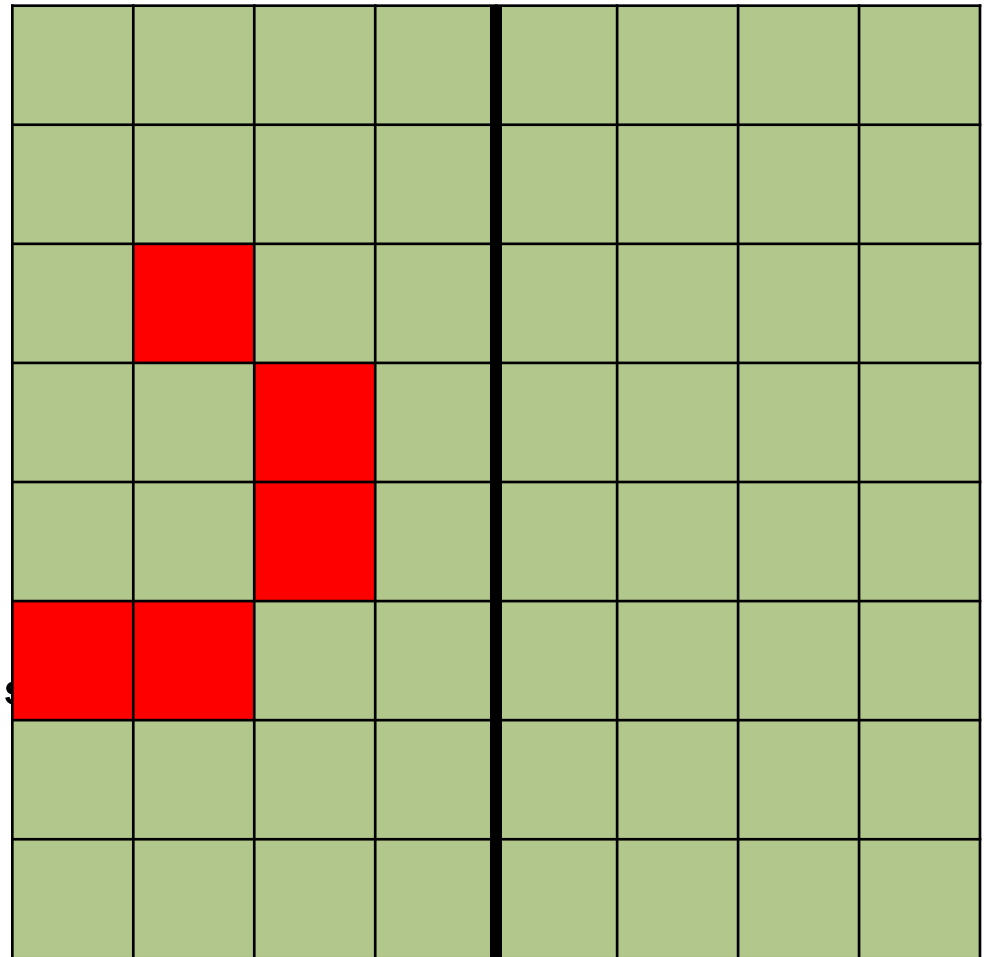
THE CORRECT ANSWER IS A!



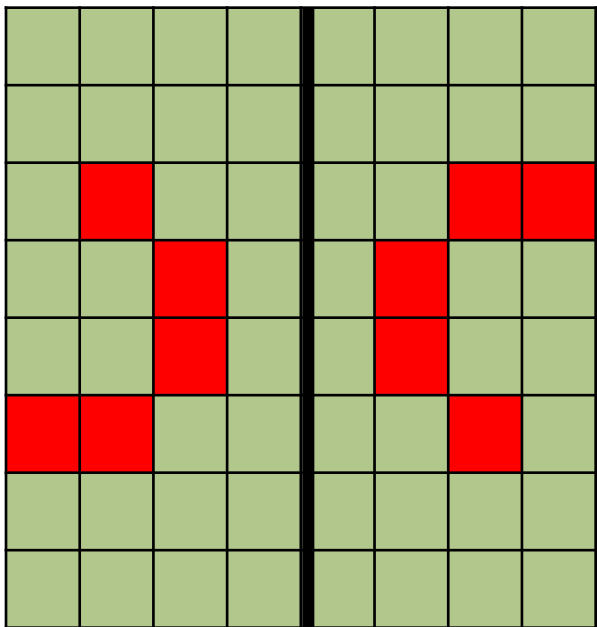
SHAPE 3

Look at this shape.

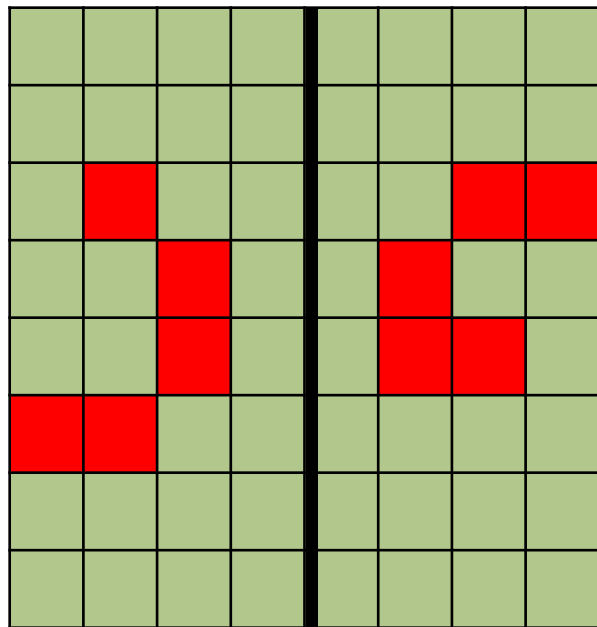
Can you spot the vertical reflection of the shape when asked.



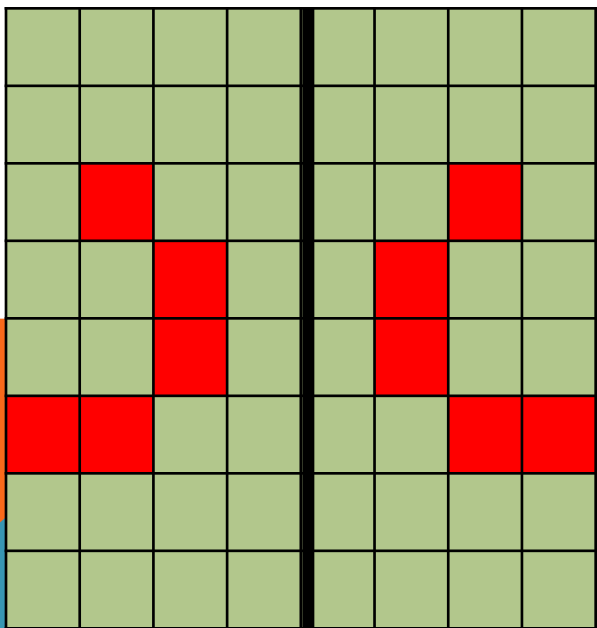
A



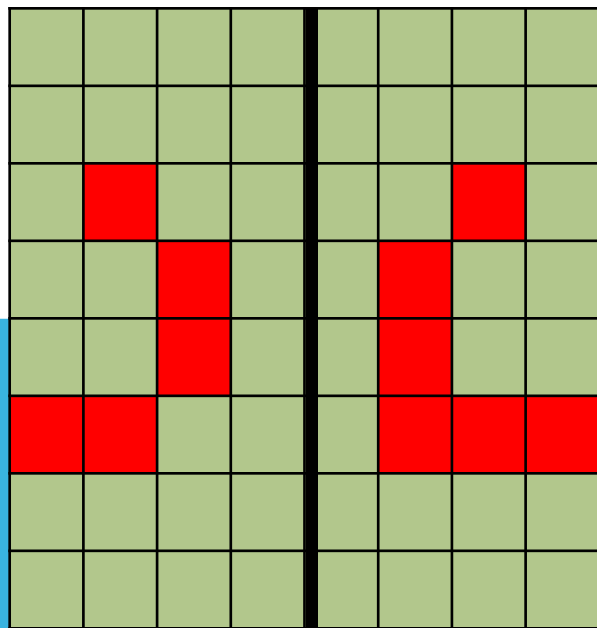
B



C

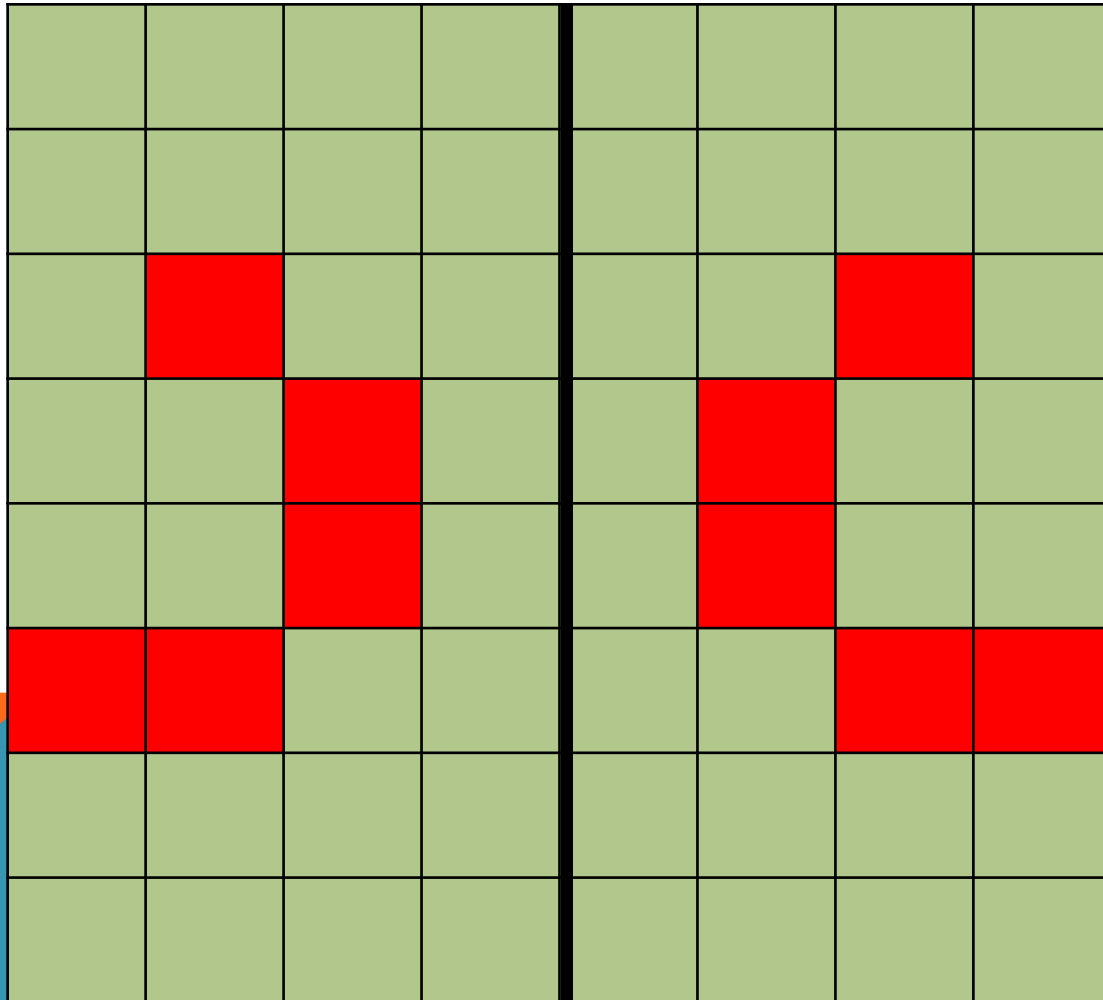


D



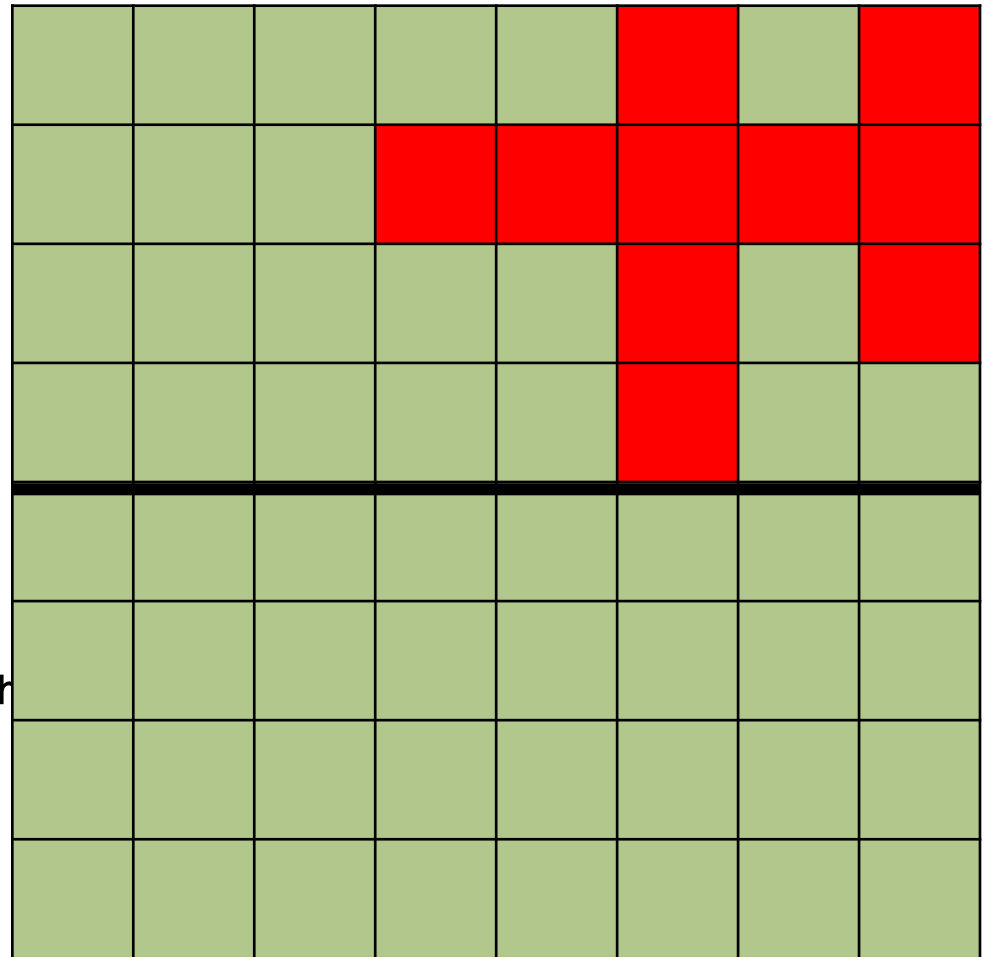
CONGRATULATIONS!

THE CORRECT ANSWER IS C!



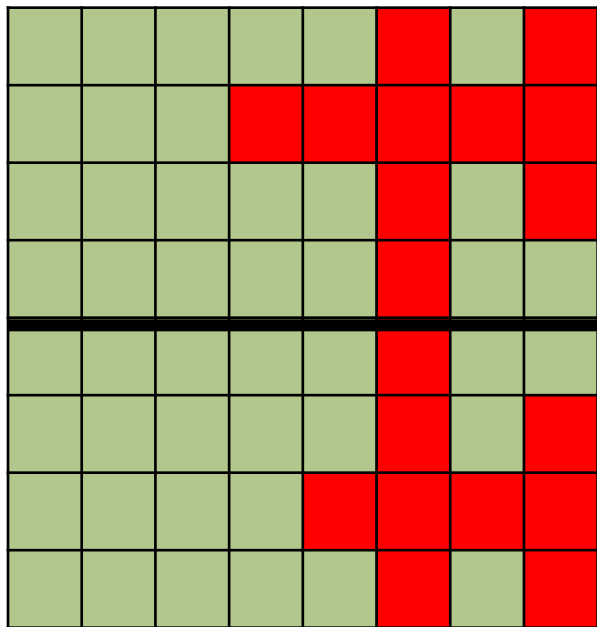
SHAPE 4

Look at this shape.

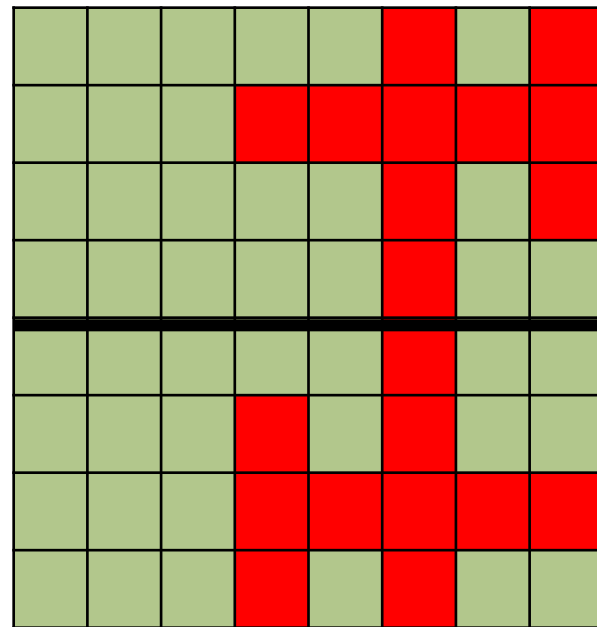


Can you spot the horizontal reflection of the letter when asked.

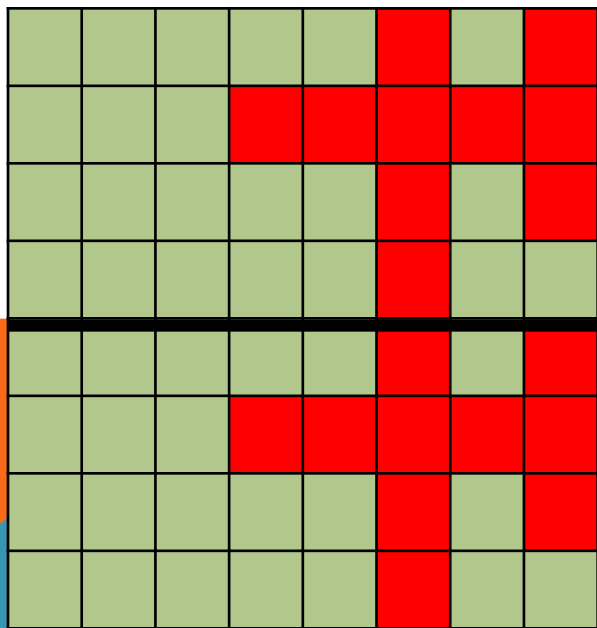
A



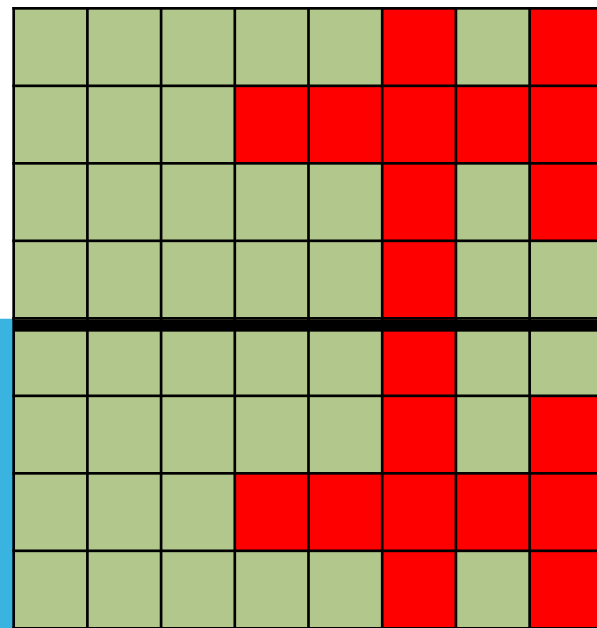
B



C

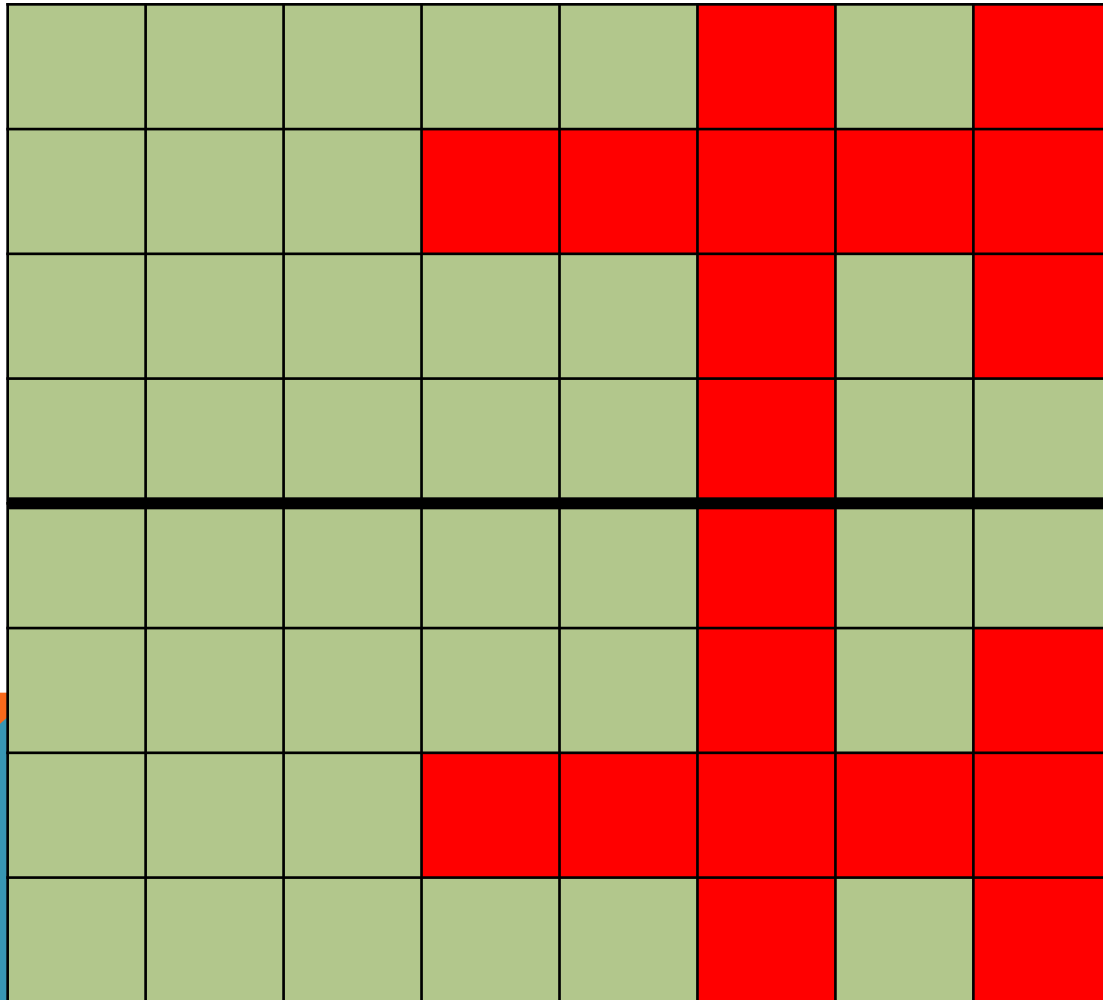


D



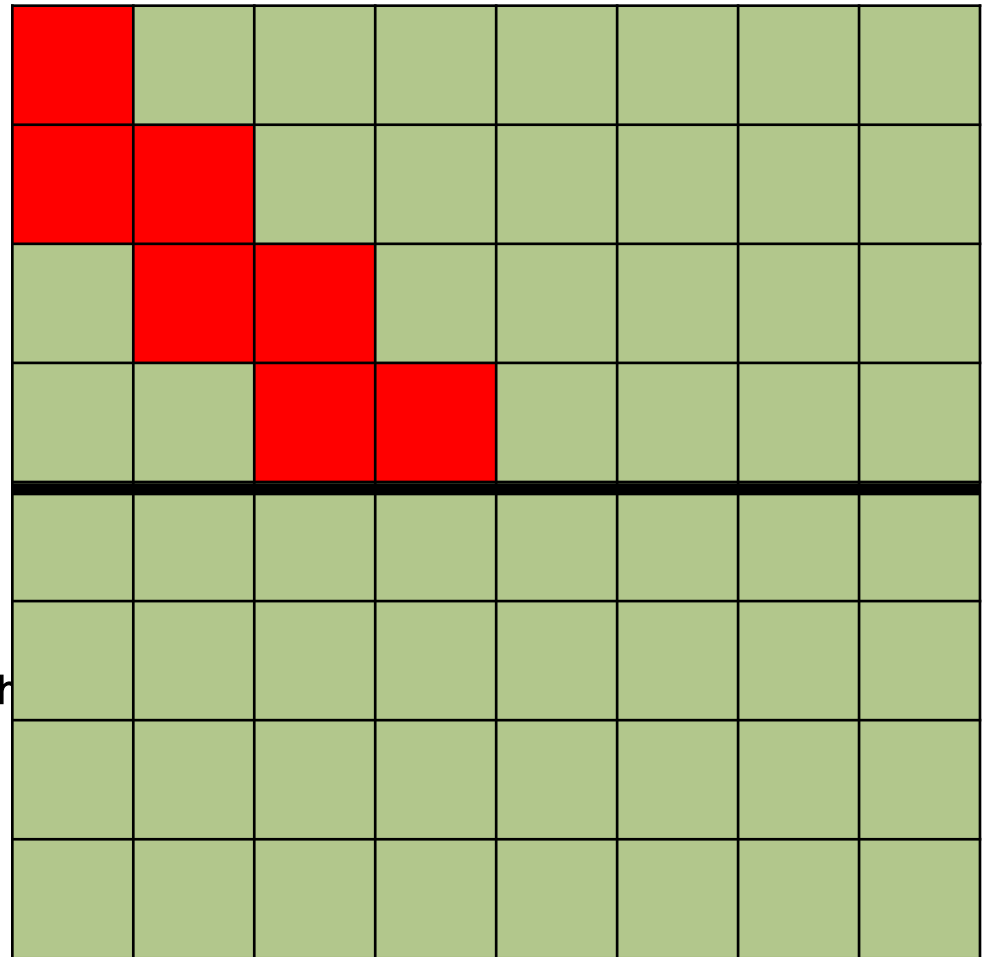
CONGRATULATIONS!

THE CORRECT ANSWER IS D!



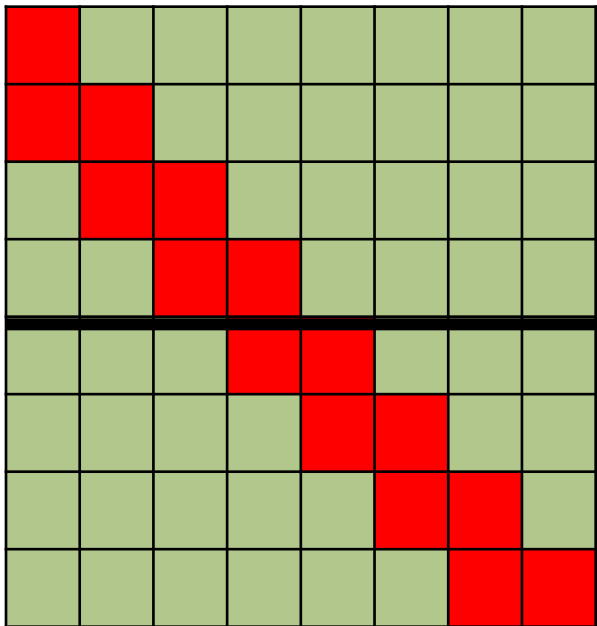
SHAPE 5

Look at this shape.

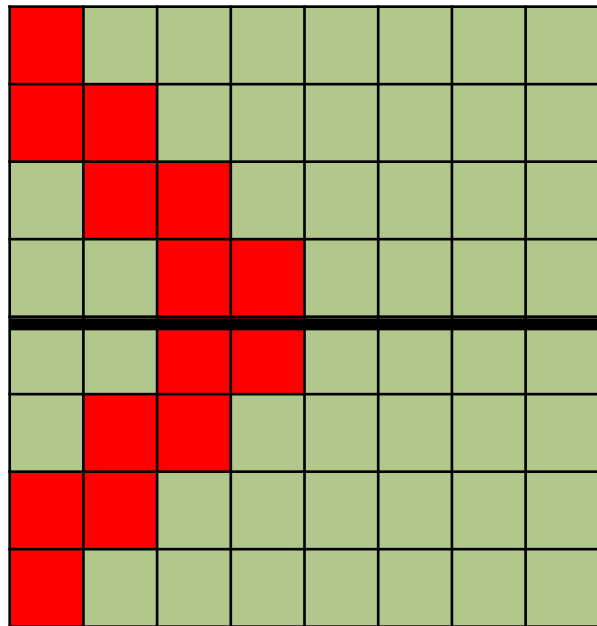


Can you spot the horizontal reflection of the letter when asked.

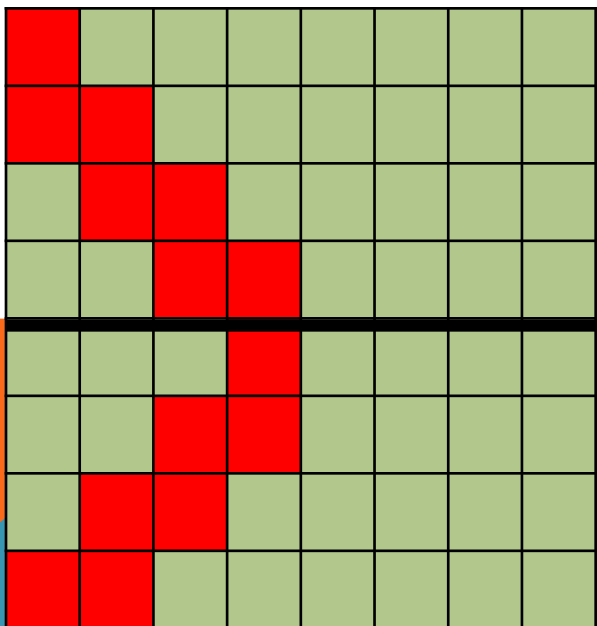
A



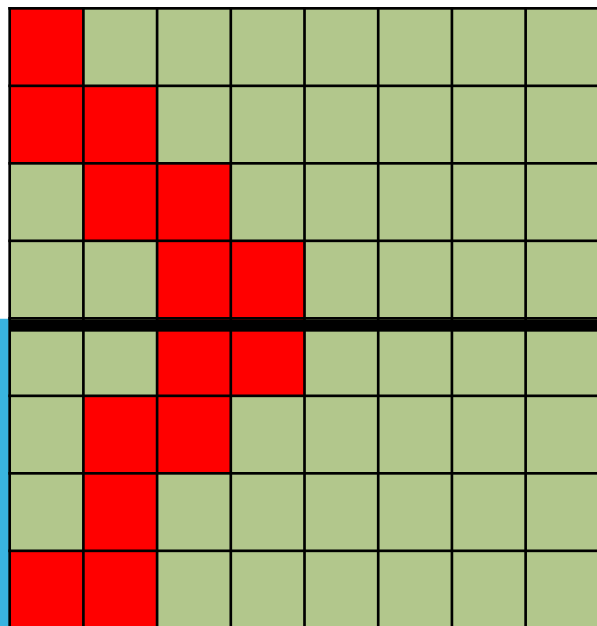
B



C

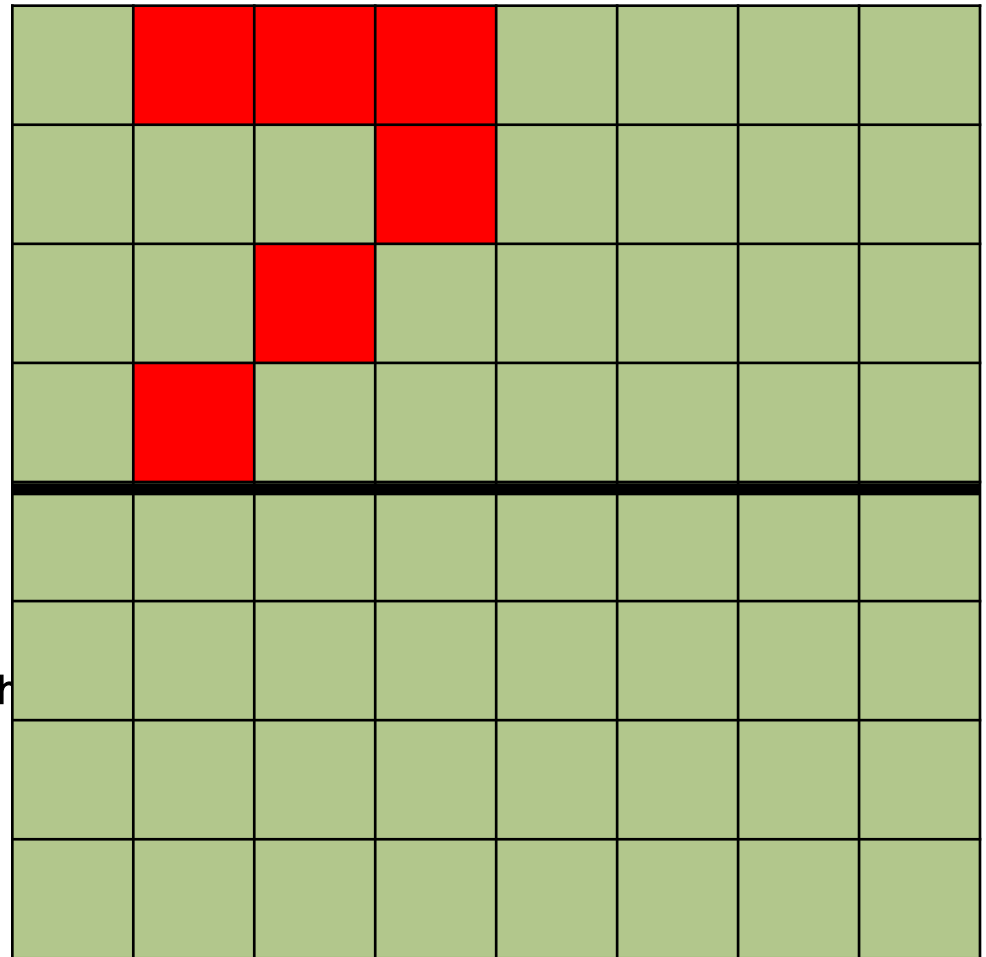


D



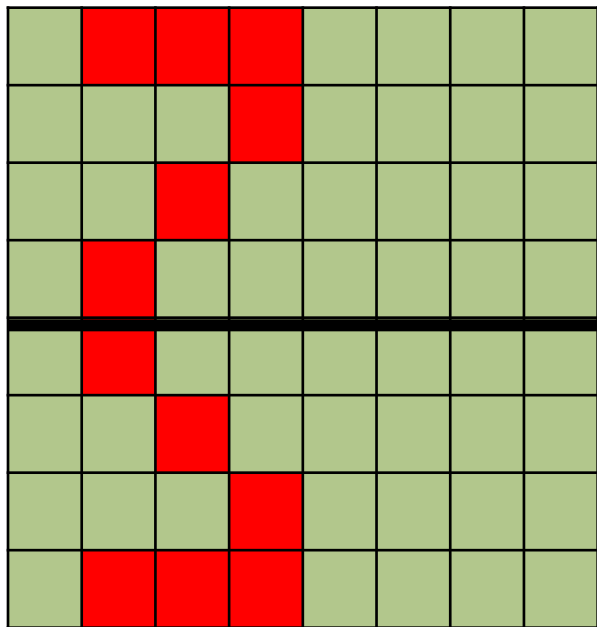
SHAPE 6

Look at this shape.

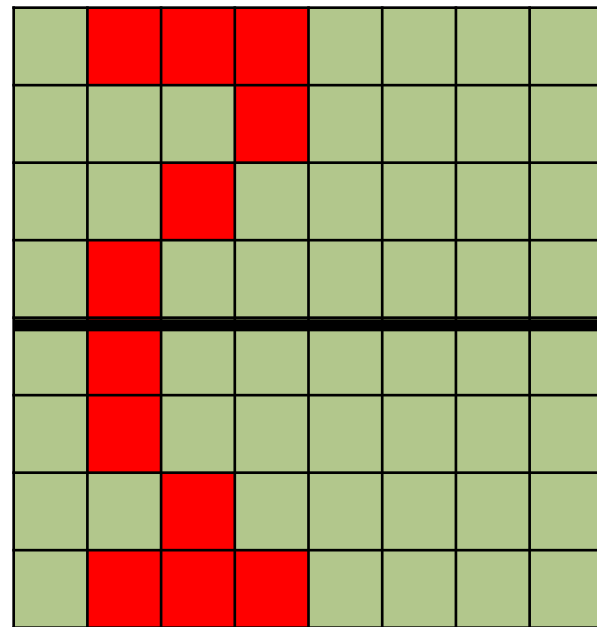


Can you spot the horizontal reflection of the letter when asked.

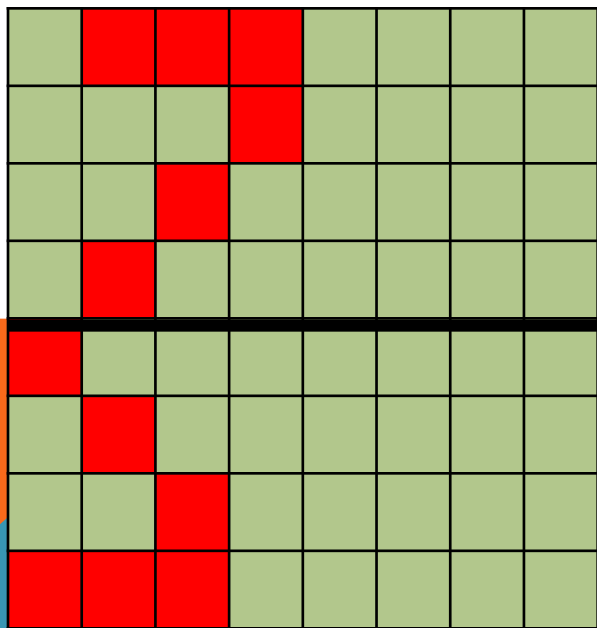
A



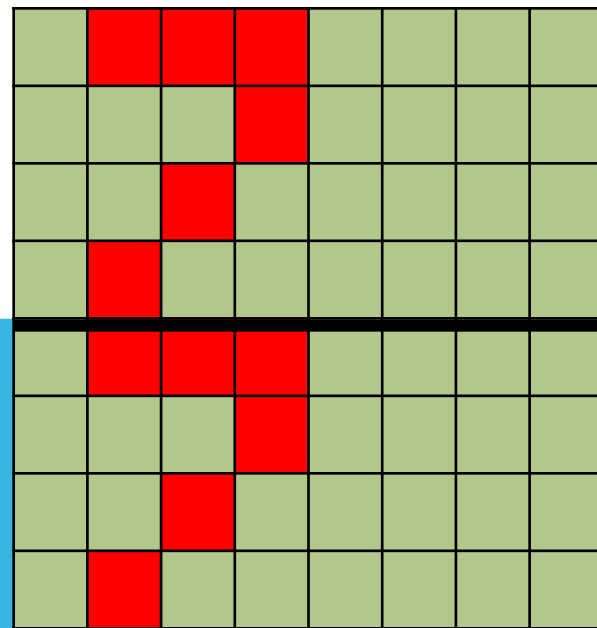
B



C

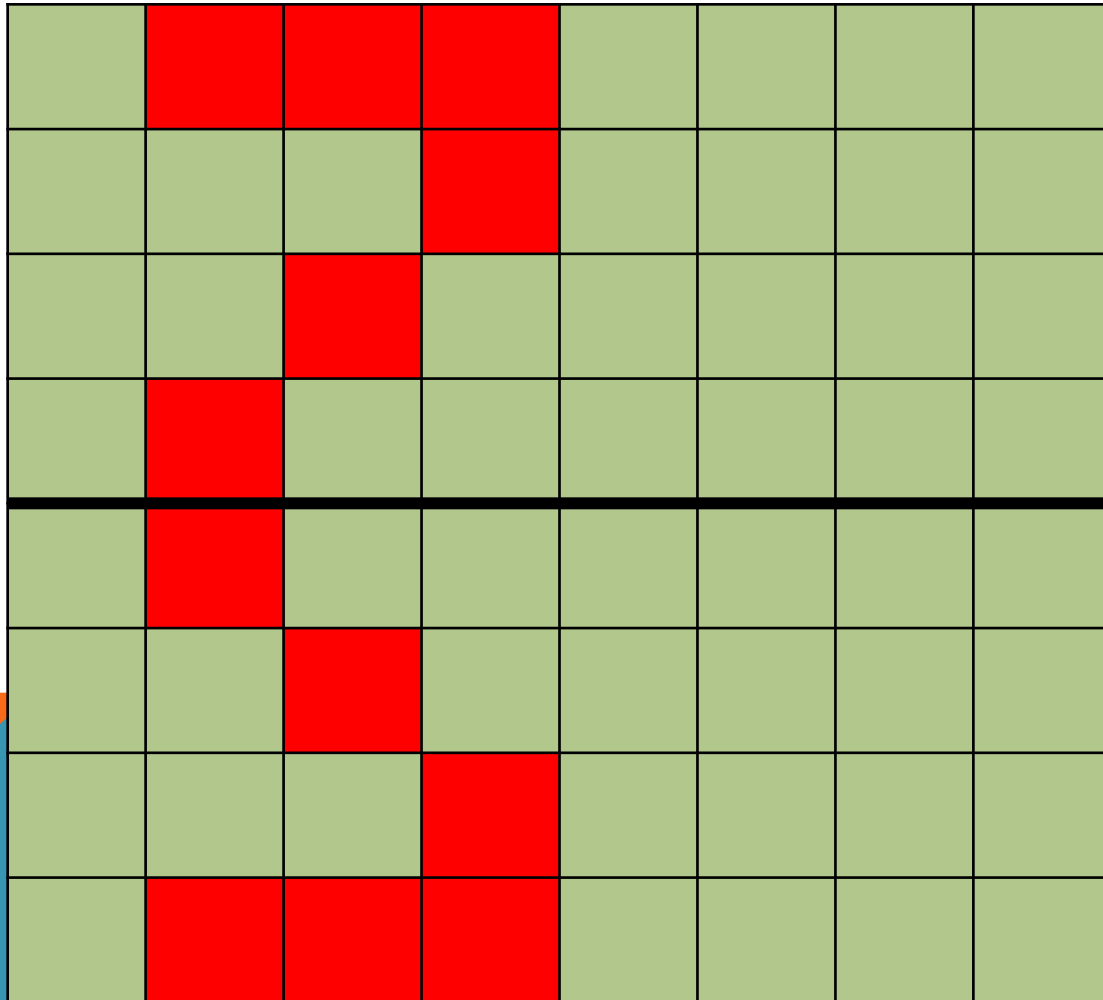


D



CONGRATULATIONS!

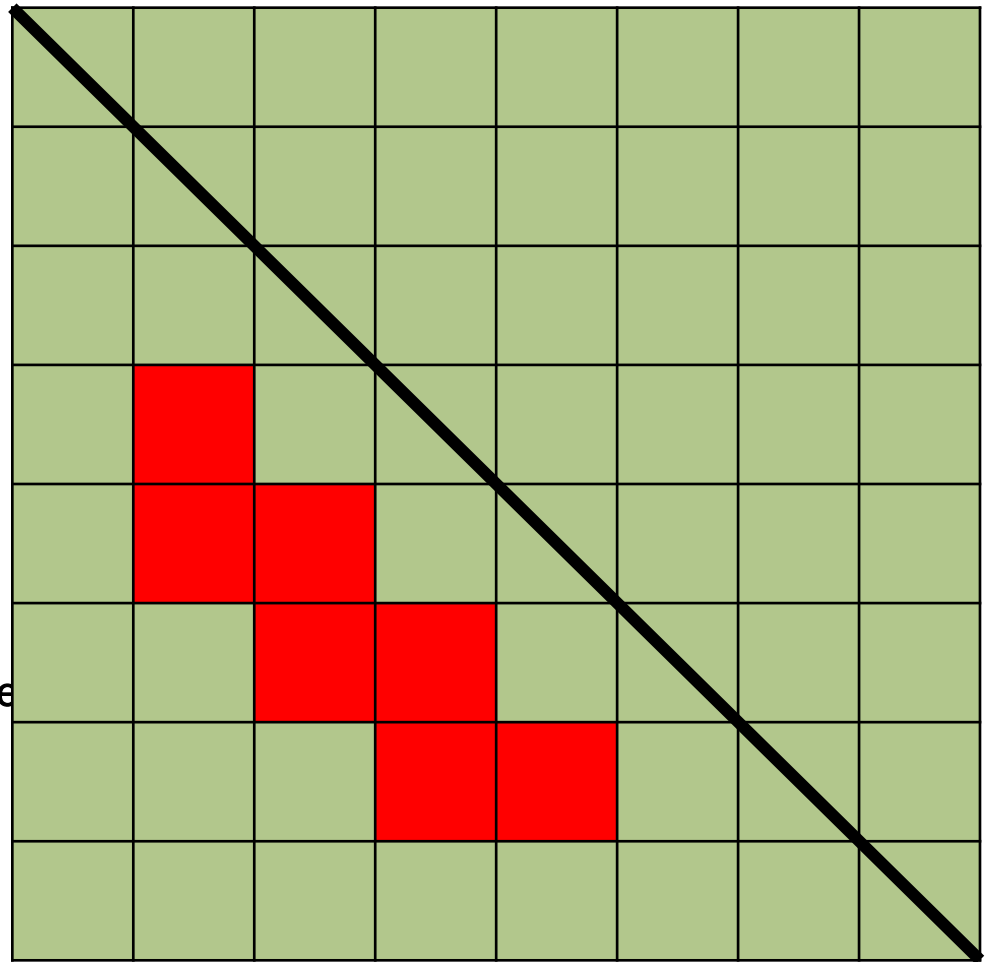
THE CORRECT ANSWER IS A!



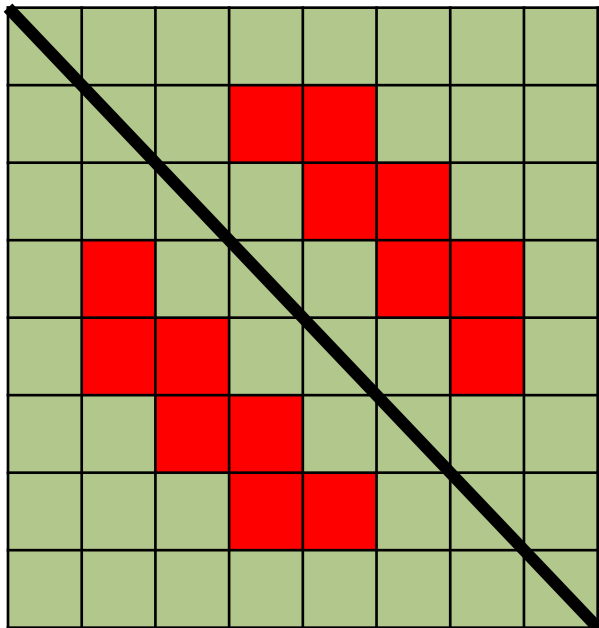
SHAPE 7

Look at this shape.

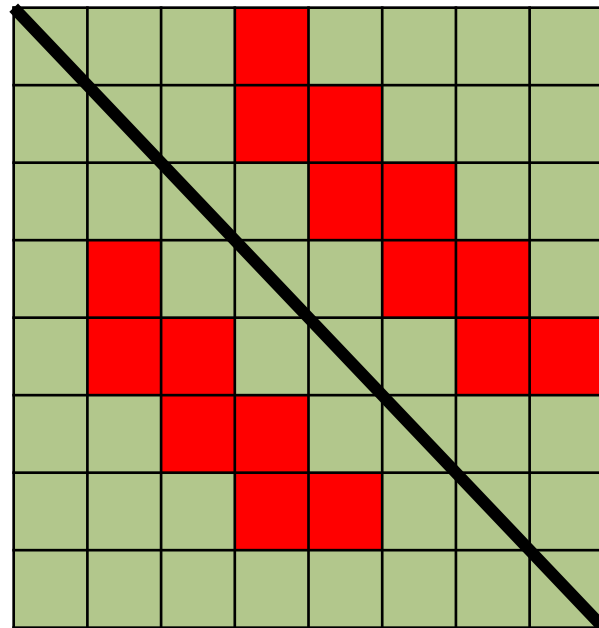
Can you spot the diagonal reflection of the
when asked.



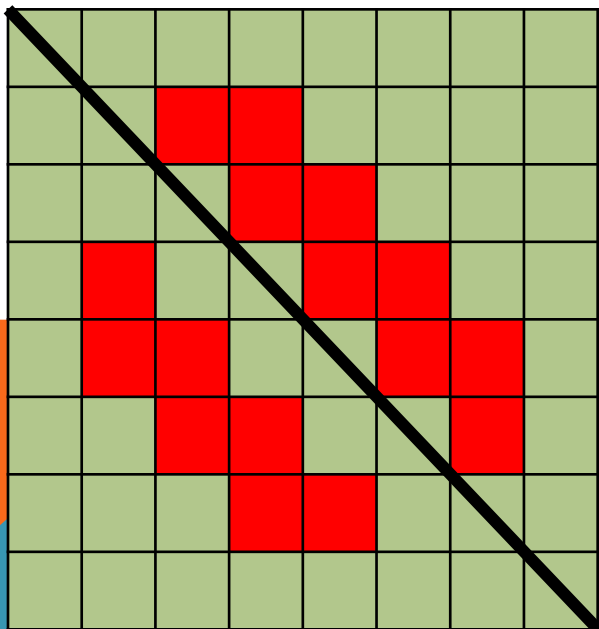
A



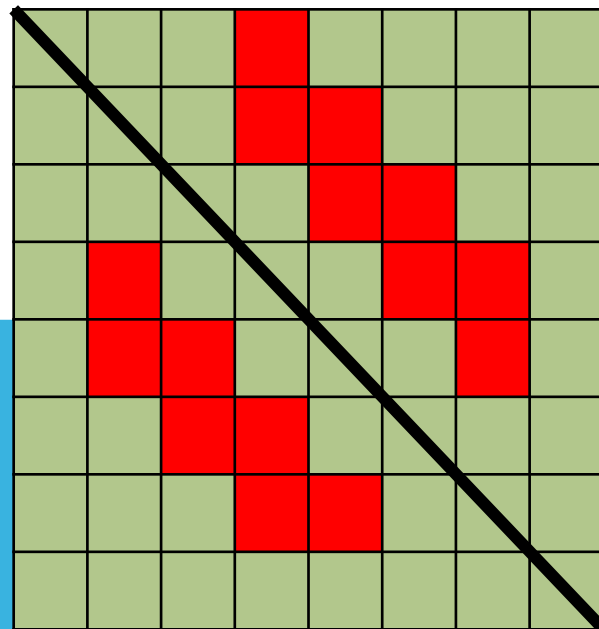
B



C



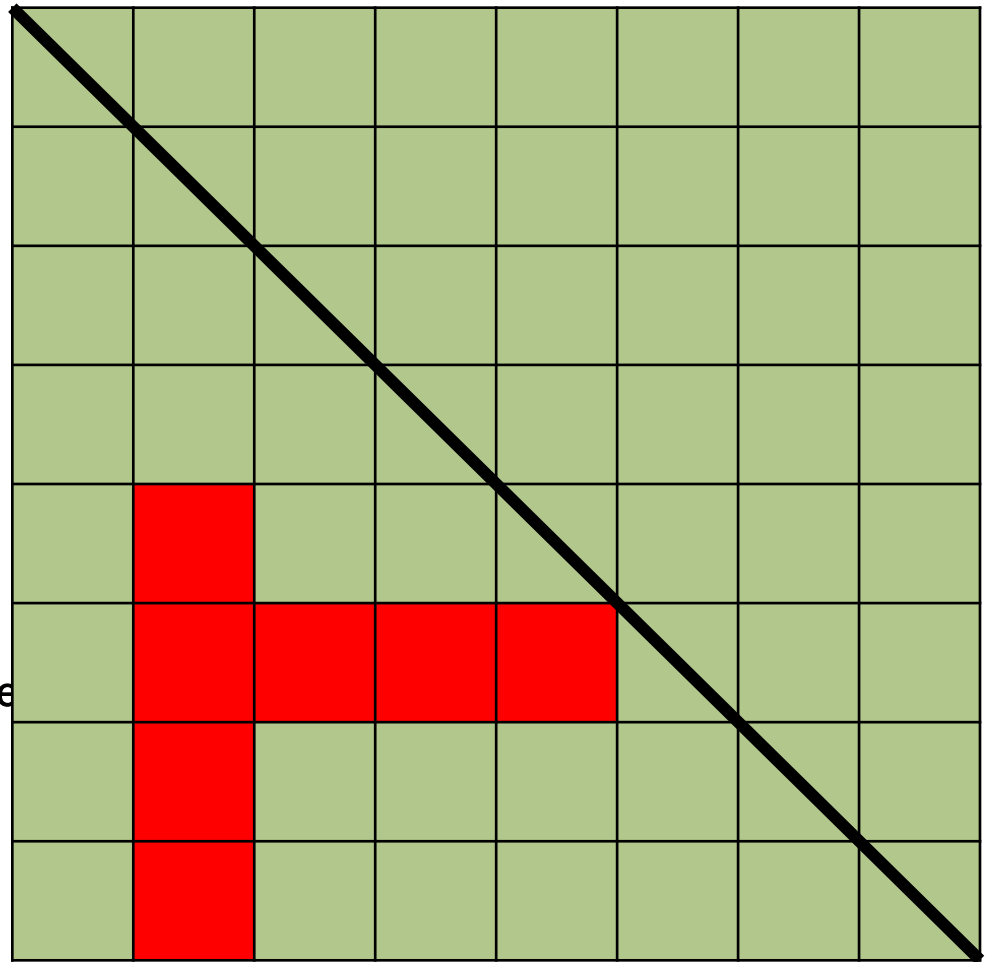
D



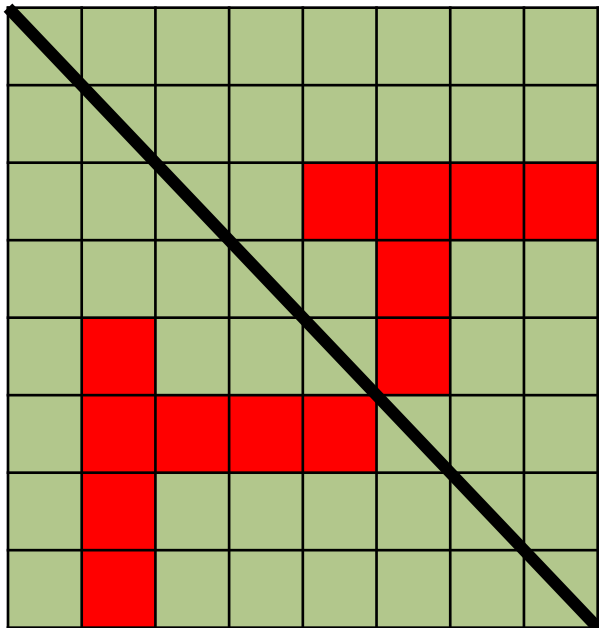
SHAPE 8

Look at this shape.

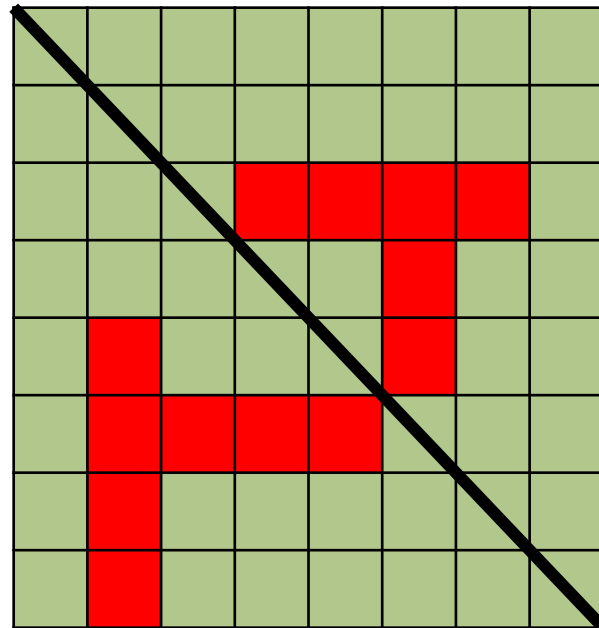
Can you spot the diagonal reflection of the
when asked.



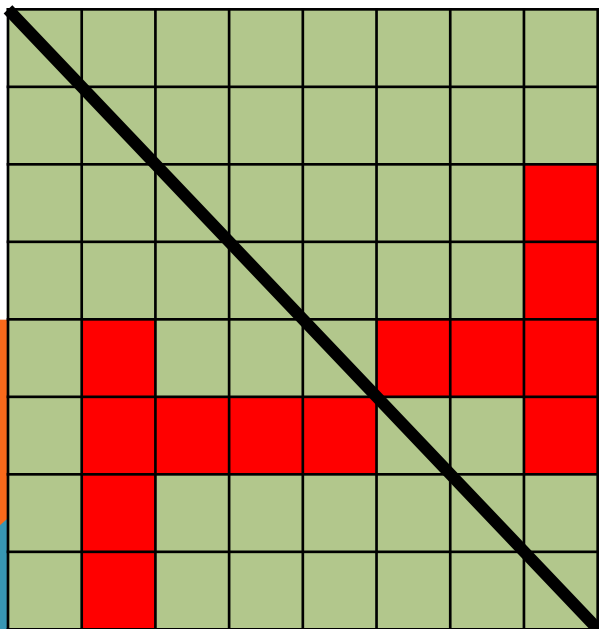
A



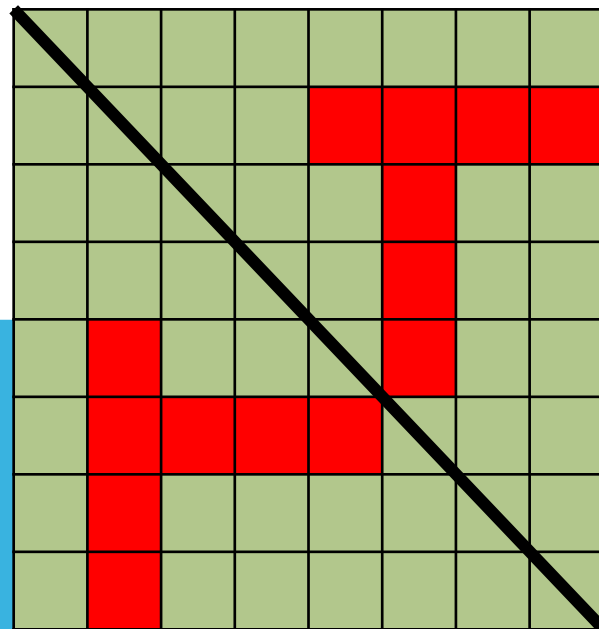
B



C

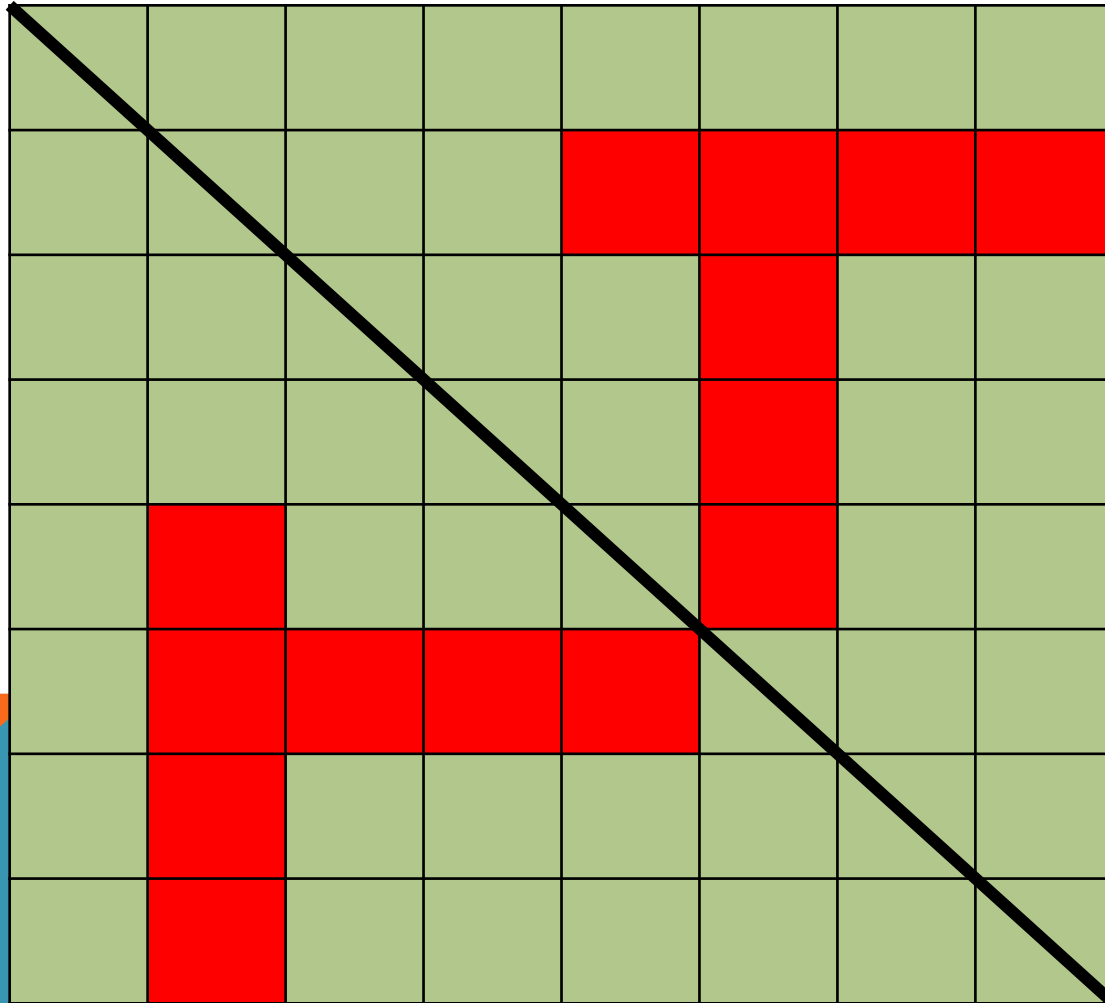


D



CONGRATULATIONS!

THE CORRECT ANSWER IS D!



NOW LET'S SEE IF YOU CAN DRAW REFLECTIONS OF GIVEN SHAPES.

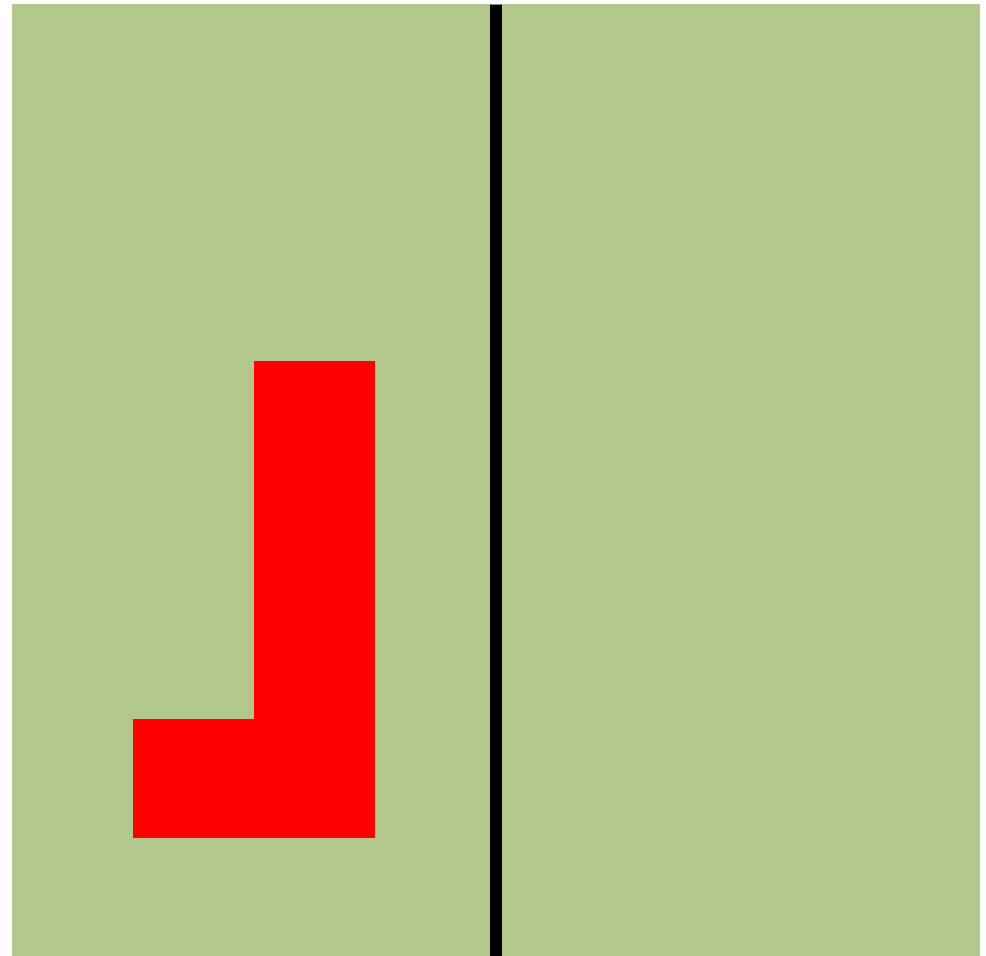
In your books, put today's date, title and learning objective.

On your sheets, draw the reflection of the shapes given. *Look carefully at whether it should be a vertical, horizontal, or even diagonal reflection.*

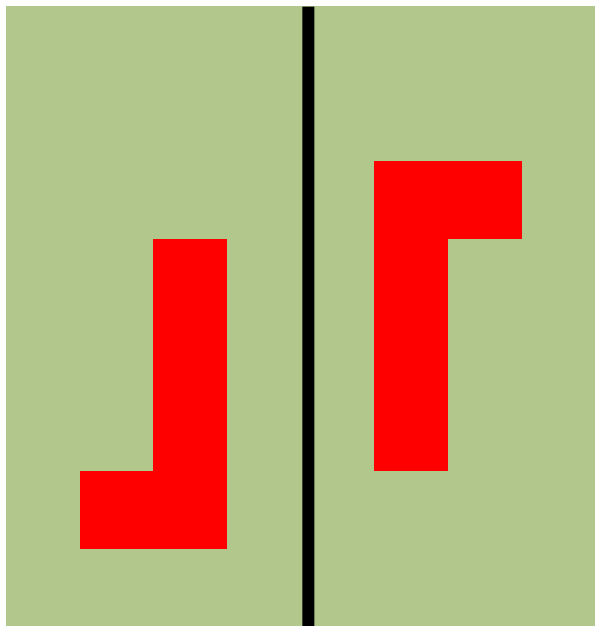


SHAPE 9

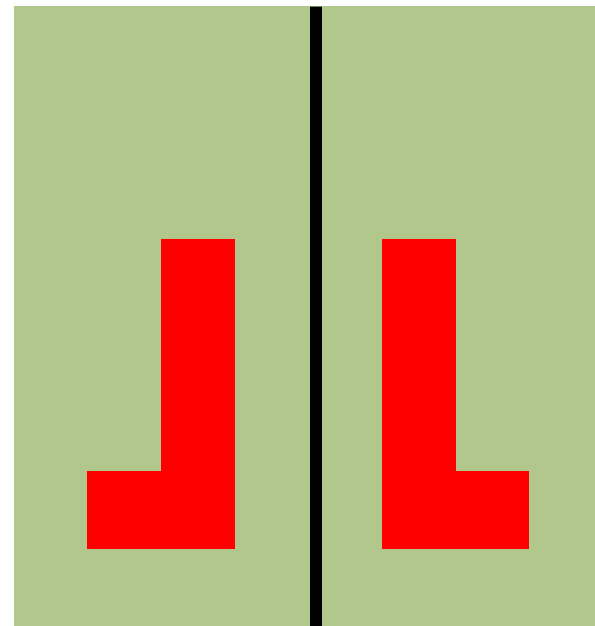
- Look at this shape.
- Can you spot the vertical reflection of the shape on the next slide? As a team, decide which is the correct reflection, and nominate one member of your group to move to the correct position when asked.



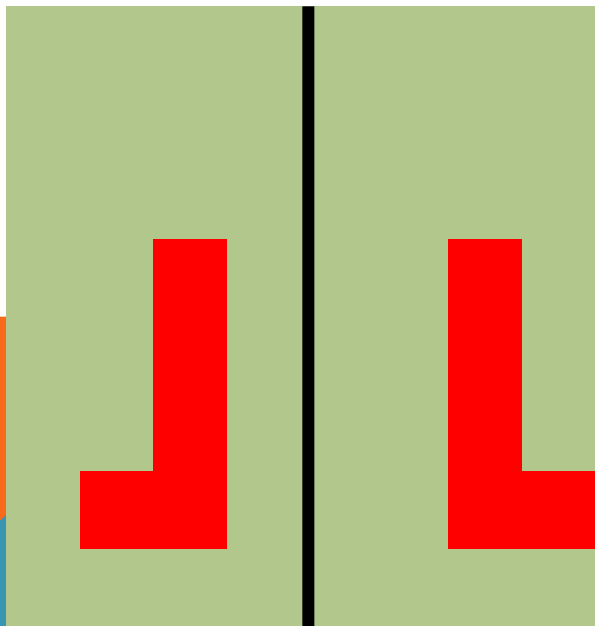
A



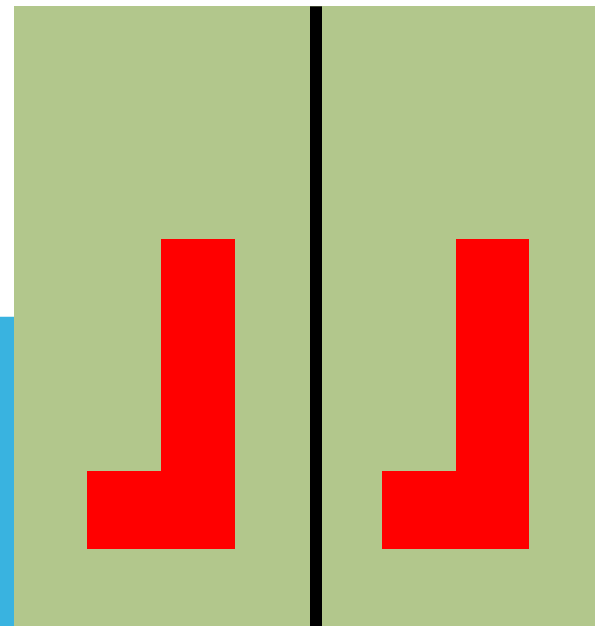
B



C

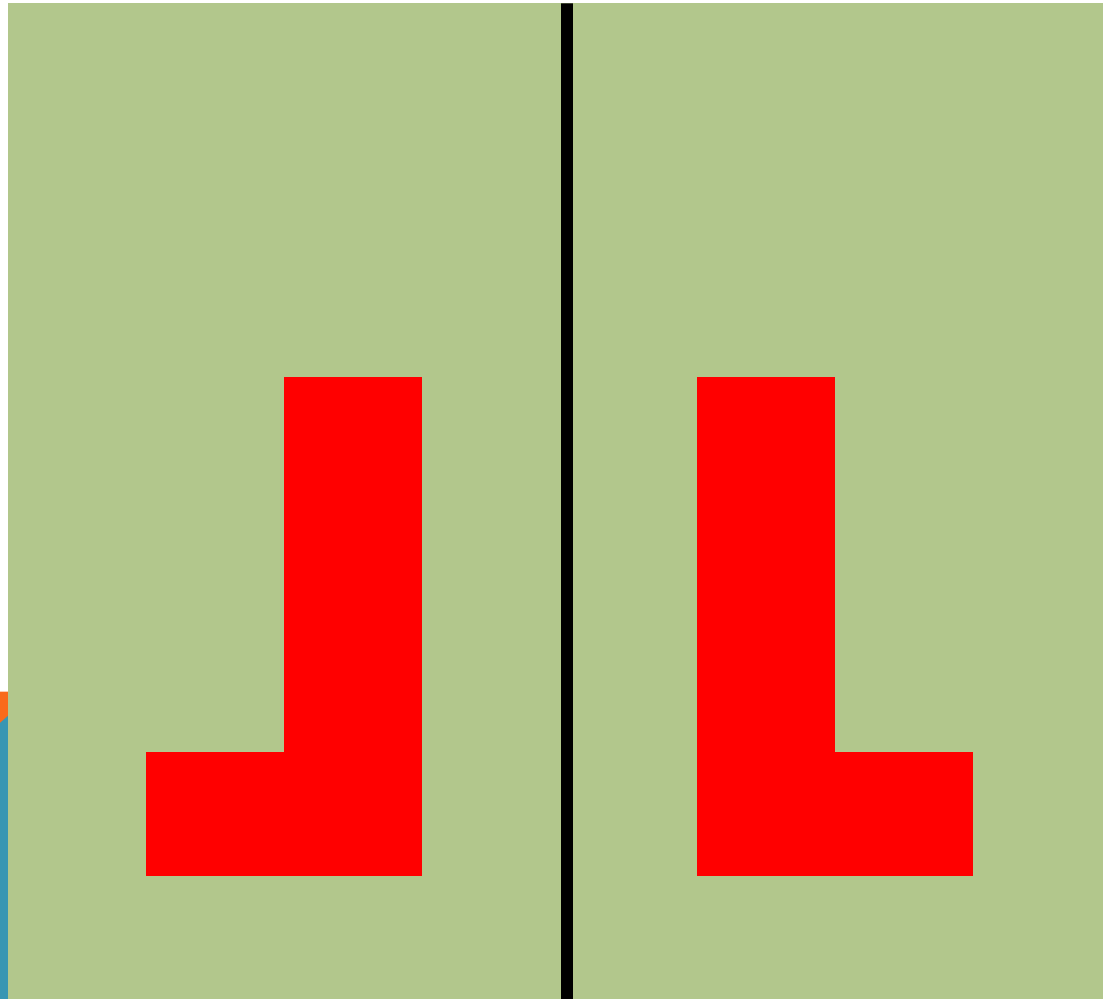


D



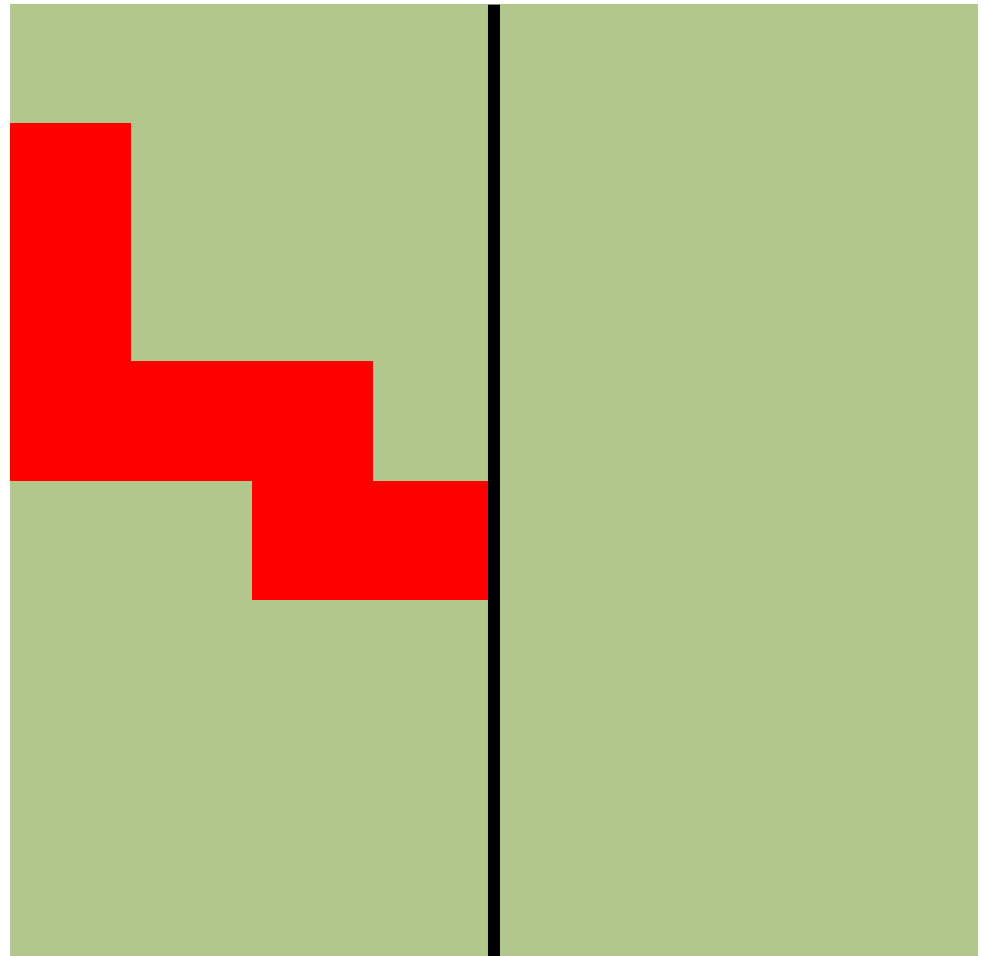
CONGRATULATIONS!

THE CORRECT ANSWER IS B!



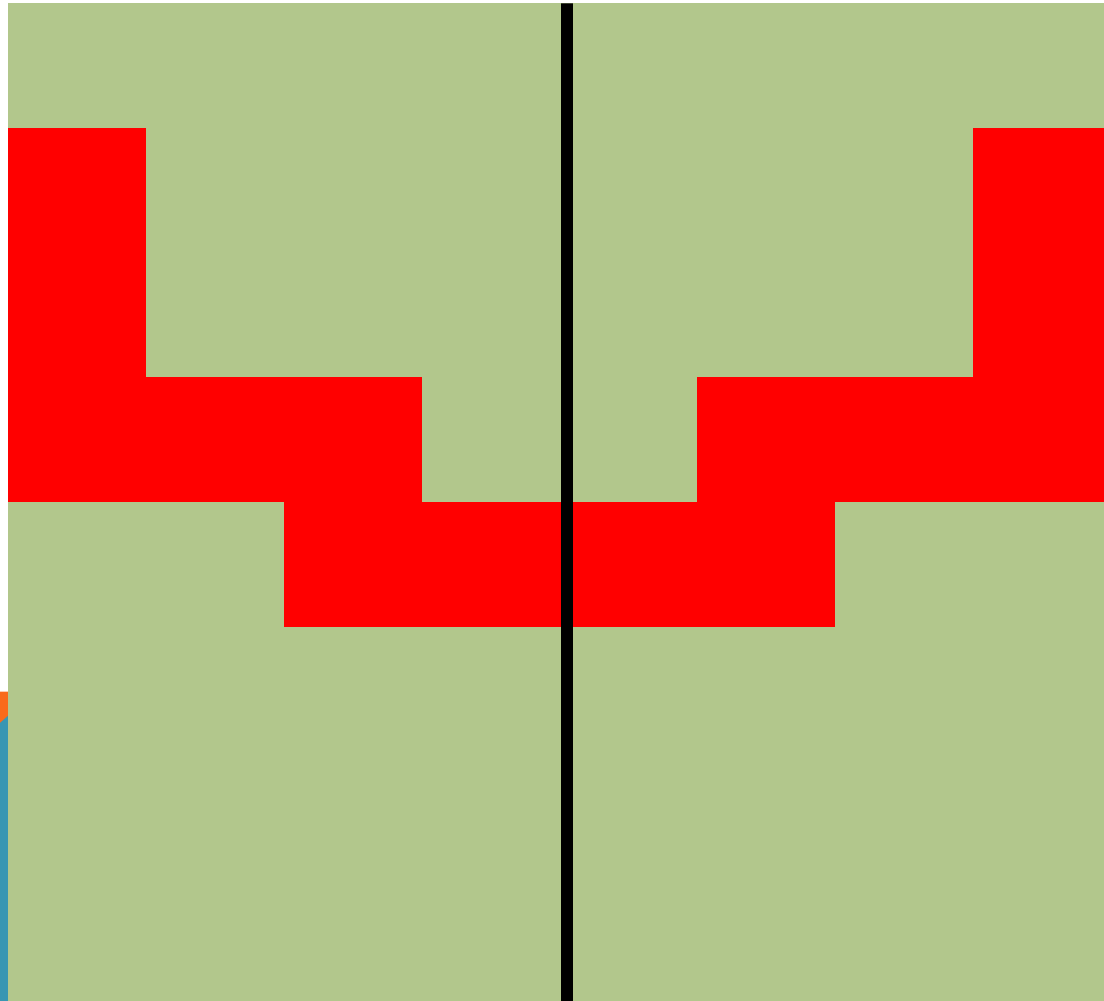
SHAPE 10

- Look at this shape.
- Can you spot the vertical reflection of the shape on the next slide? As a team, decide which is the correct reflection, and nominate one member of your group to move to the correct position when asked.



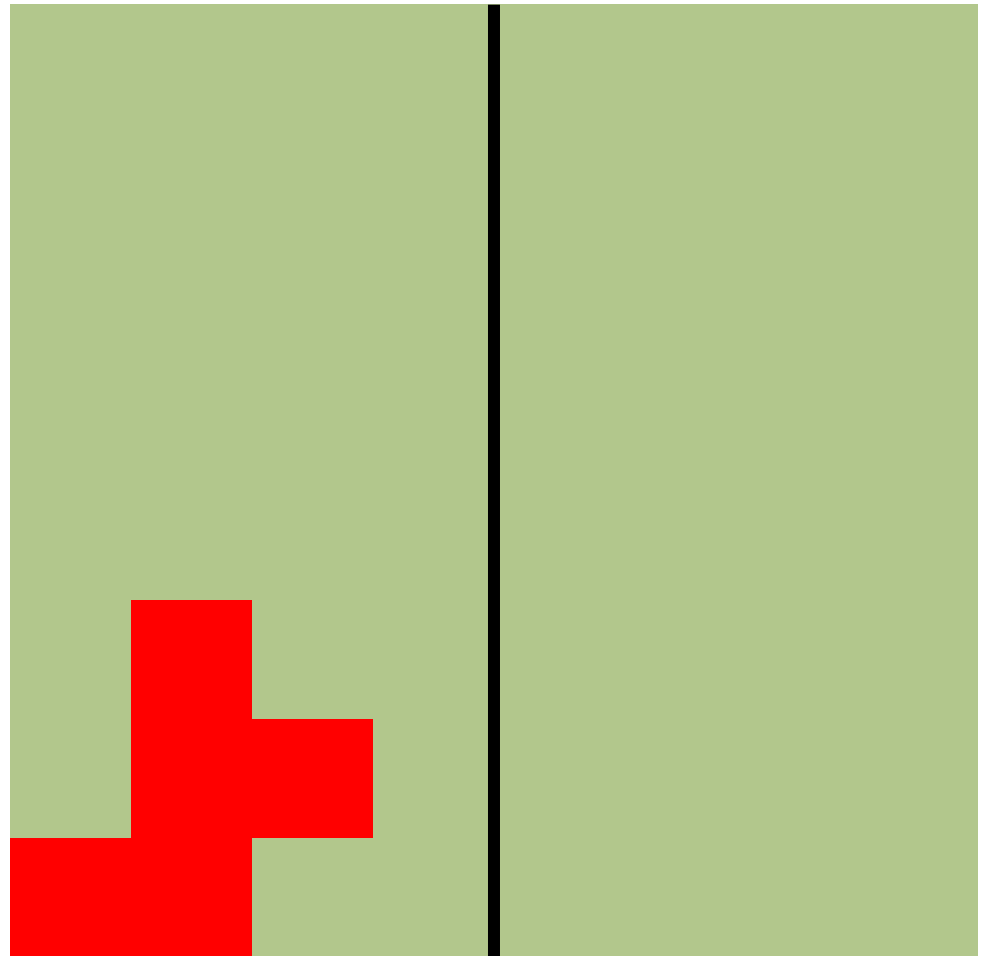
CONGRATULATIONS!

THE CORRECT ANSWER IS C!

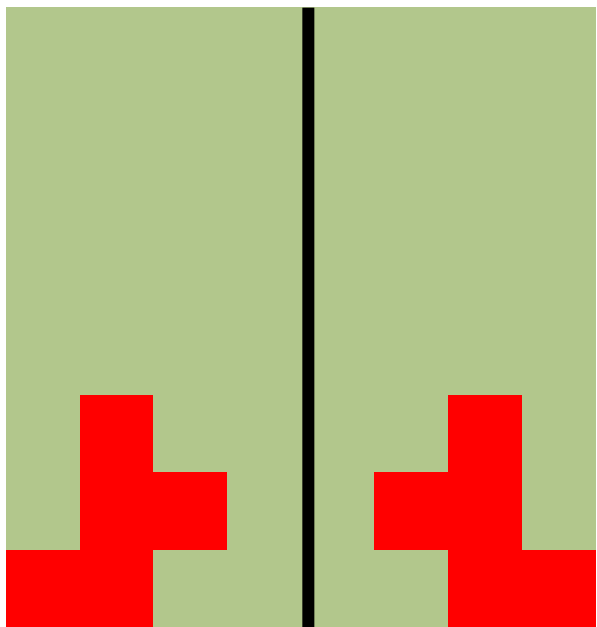


SHAPE 11

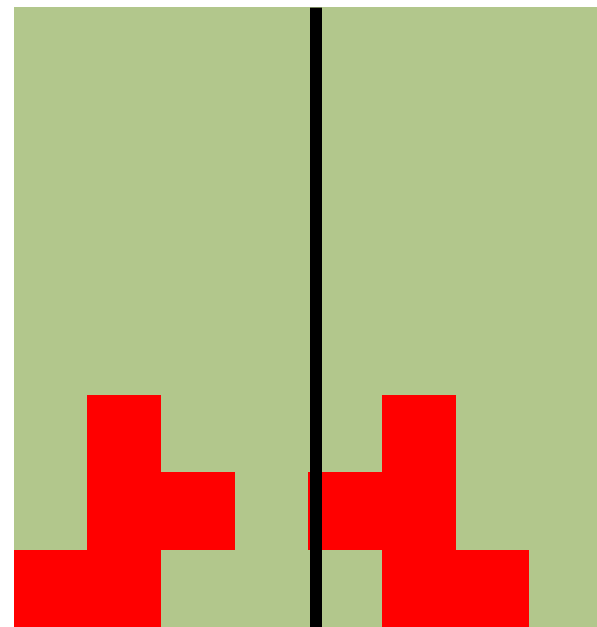
- Look at this shape.
- Can you spot the vertical reflection of the shape on the next slide? As a team, decide which is the correct reflection, and nominate one member of your group to move to the correct position when asked.



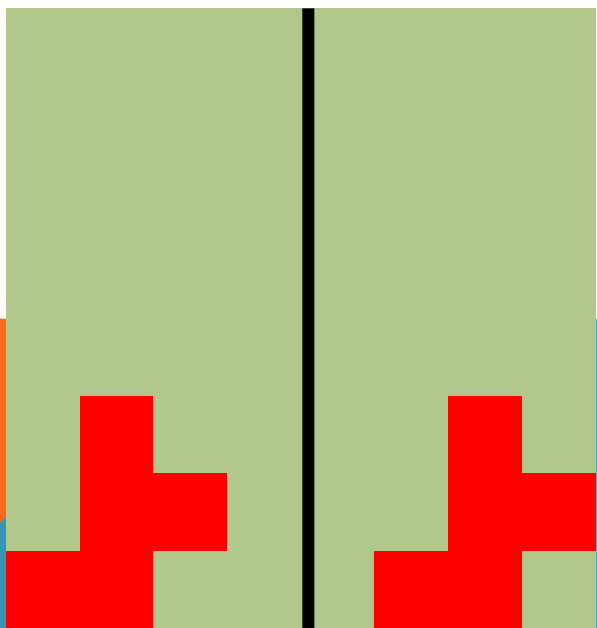
A



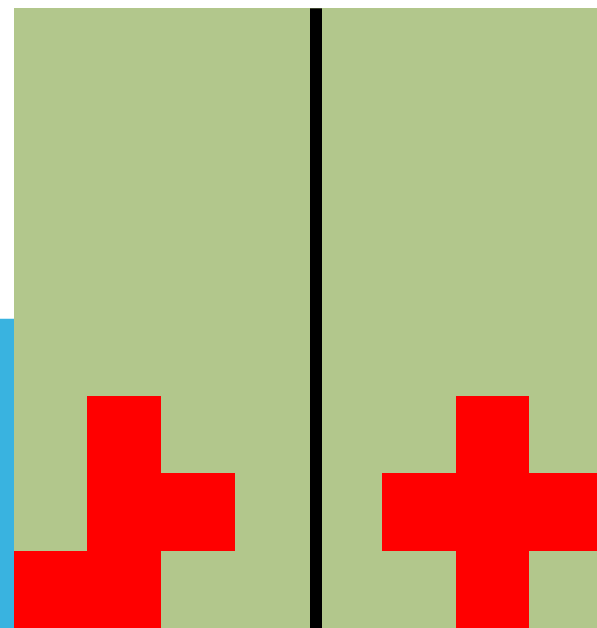
B



C

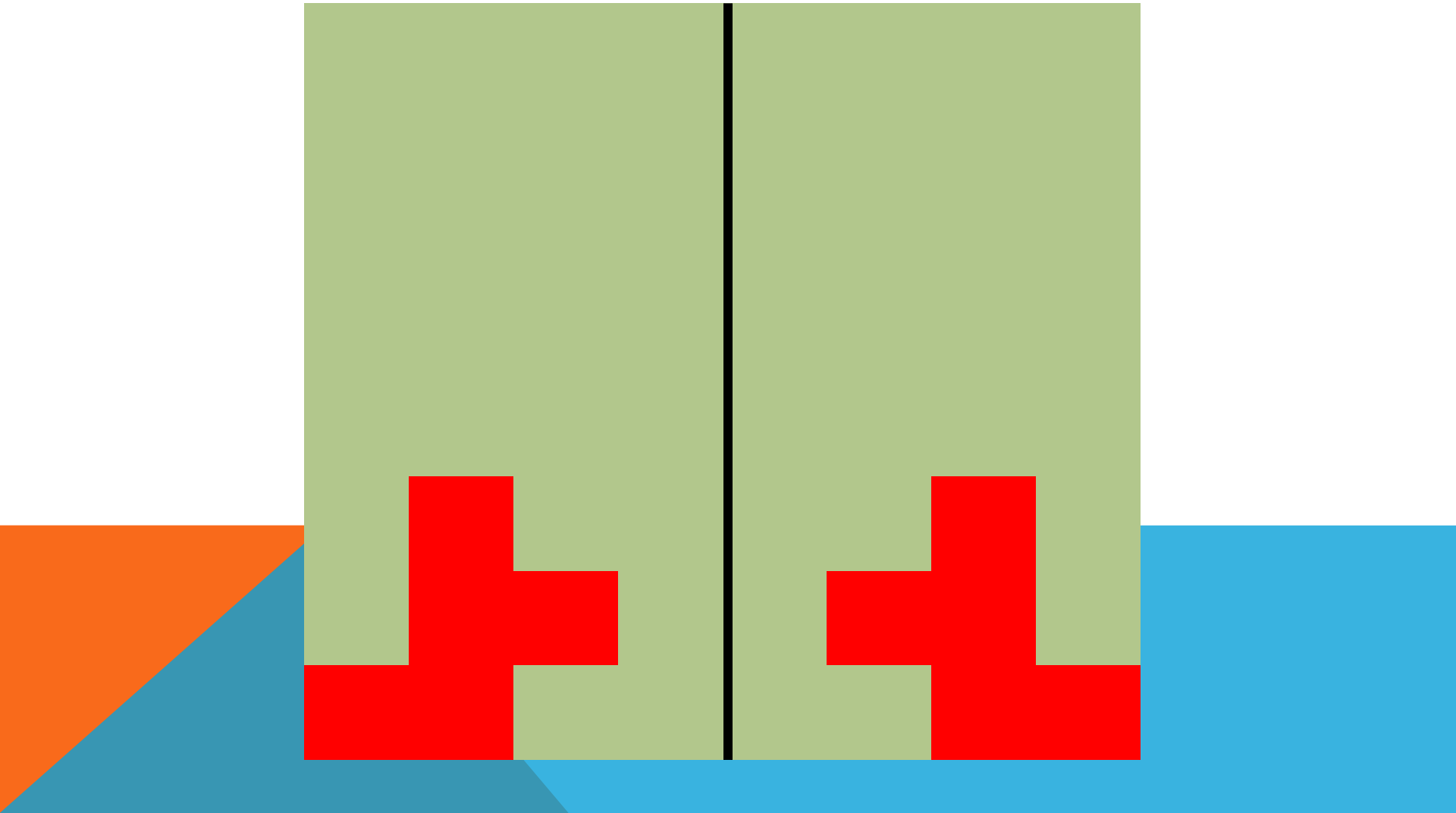


D

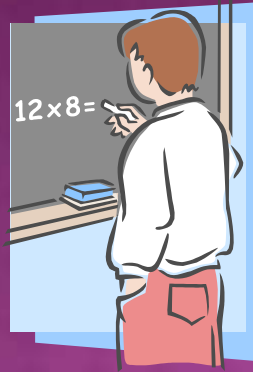


CONGRATULATIONS!

THE CORRECT ANSWER IS A!



Learning Objective



Derive doubles and halves of
2 digit decimal numbers.

PARTITIONING

- ▶ We can use partitioning to help us double numbers.
 1. Double the tens
 2. Double the units
 3. Recombine (add them back together again!)



PARTITIONING

- ▶ Double the following numbers using partitioning

27

62

88

39



PARTITIONING

- ▶ Halve the following numbers using partitioning

86

62

28

36



PARTITIONING

- ▶ Halve the following numbers using partitioning

87

63

29

31



DOUBLING MULTIPLES OF 10

Consider doubling multiples of ten for example 730. This is easy if we think of 730 as 73 tens

Double 73 = 146 tens or 1460. So doubling multiples of 10 is as easy as doubling 2 digit numbers.

Double the following numbers

320	450	320
3500	2300	6700



HALVING MULTIPLES OF 10

Halving 760 or halving 76 tens

Half 70 tens = 35

Half 6 tens = 3 tens

= 38 tens

= 390

Halve the following numbers

880

670

240



DOUBLING MULTIPLES OF 10

- ◉ Double the following multiples of 100

450

230

670

980



DOUBLING MULTIPLES OF 100

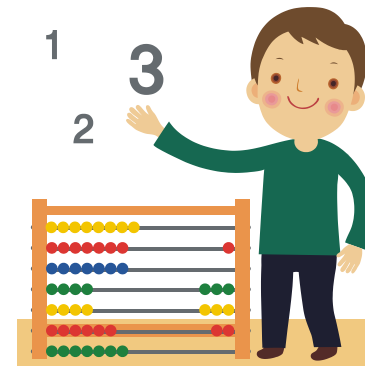
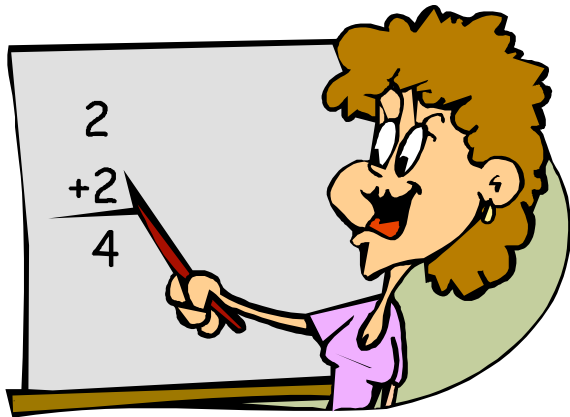
- ◉ Double the following multiples of 100

2600

3500

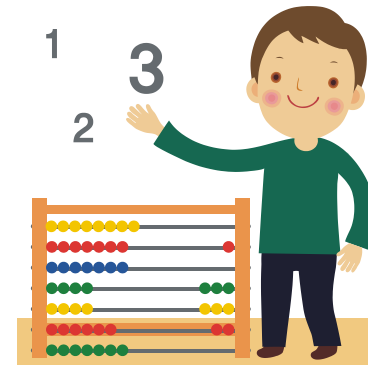
3200

2100



PARTITIONING

- We can use partitioning to help us double decimal numbers.
 1. Double the units
 2. Double the tenths
 3. Recombine (add them back together again!)



DOUBLING DECIMALS

◉ Double the following decimals

3.5

2.8

7.3

8.3

3.6

2.9

5.6

9.6

