

Week 7

This week in a nutshell:

Here we see the interleaving of topics (questions 1, 2 and 4) to help to reinforce previously learnt information. Question 3 is about area and asks students to identify the shape whose area the given formula represents. Question 5 then requires students to recall the correct formula needed to calculate the area of the shape given. The distinction between using a formula “because we can” and deriving a result from key concepts often makes for an excellent discussion.

Question 1: Mental methods with decimals

Question 2: Written multiplication

Question 3: Area formulae

Question 4: Plotting in all four quadrants

Question 5: Area of simple shapes

This week's ideas for class discussion include:

Question 1: **Mental methods with decimals**

- How has your confidence/ability changed when using mental methods?

Question 2: **Written multiplication**

- How many different methods have you used for multiplication? Which is your favourite, and why?

Question 3: **Area formulae**

- Why do we learn formulae?

Question 4: **Plotting in all four quadrants**

- How important is it that we plot in the correct quadrant?

Question 5: **Area of simple shapes**

- How can we extend our knowledge of simple shapes to those that are more complex?

Week 7: Day 1

1) Complete these calculations:

a) $1.6 + \underline{\quad} = 2$

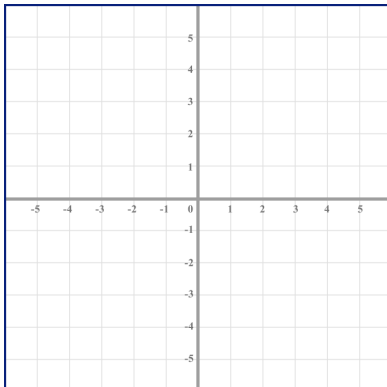
b) $\underline{\quad} + 3.5 = 5$

2) What is the product of 25 and 24?

3) For what 2D shape does this formula give the area?

$$\text{Area} = \pi r^2$$

4) Plot: A(0, 0) B(3, 1)



5) Find the area of the rectangle.



Week 7: Day 1 Answers

1) Complete these calculations:

a) $1.6 + 0.4 = 2$

b) $1.5 + 3.5 = 5$

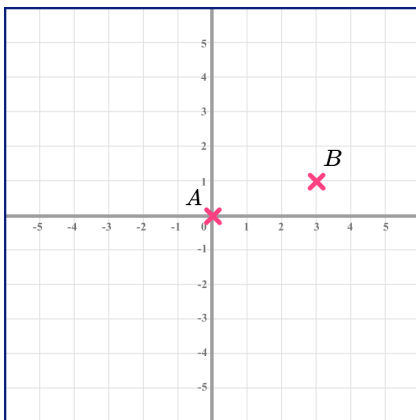
2) What is the product of 25 and 24?

600

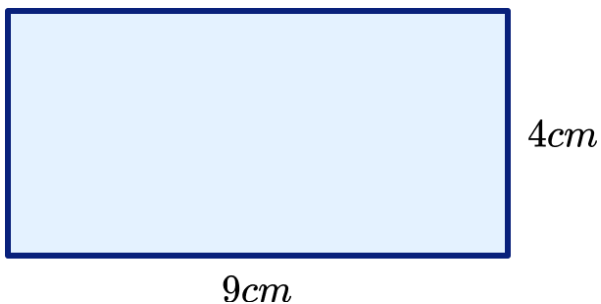
3) For what 2D shape does this formula give the area?

Area = πr^2 circle

4) Plot: A(0, 0) B(3, 1)



5) Find the area of the rectangle.



36cm²

Week 7: Day 2

1) Complete these calculations:

a) $2.7 + \underline{\quad} = 3$

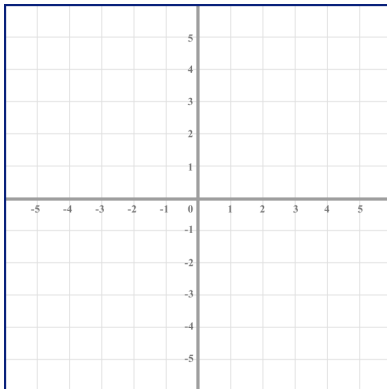
b) $\underline{\quad} + 4.9 = 9$

2) Multiply 63 by 9.

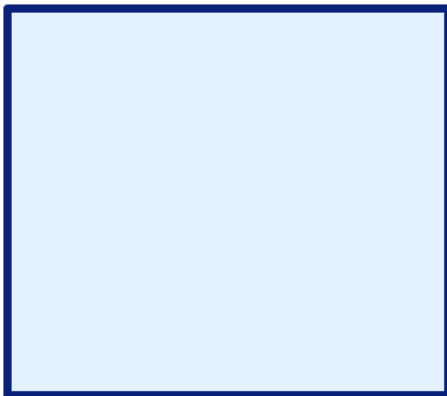
3) For what 2D shape does this formula give the area?

$$\text{Area} = l \times w$$

4) Plot: A(2, 0) B(1, -1)



5) This square has a side length of 7cm. What is the area of the square?



Week 7: Day 2 Answers

1) Complete these calculations:

a) $2.7 + 0.3 = 3$

b) $4.1 + 4.9 = 9$

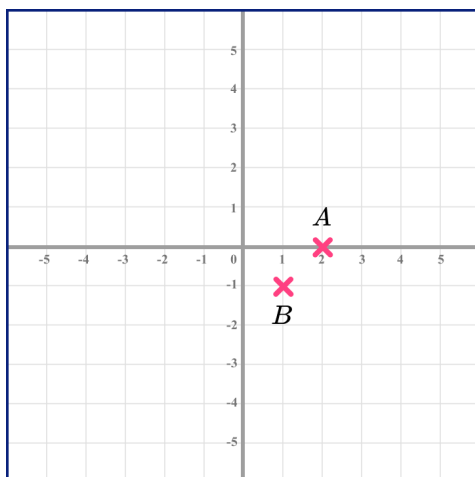
2) Multiply 63 by 9.

567

3) For what 2D shape does this formula give the area?

Area = $l \times w$ **rectangle**

4) Plot: A(2, 0) B(1, -1)



5) This square has a side length of 7cm. What is the area of the square?



49cm^2

Week 7: Day 3

1) Complete these calculations:

a) $5 - \underline{\quad} = 2.6$

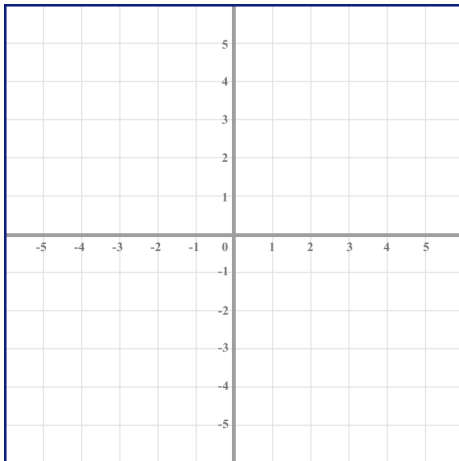
b) $\underline{\quad} + 3.2 = 6$

2) What is 17 lots of 19?

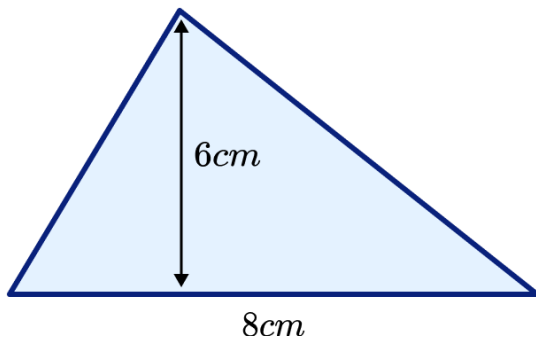
3) For what 2D shape does this formula give the area?

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

4) Plot: A(-2, 1) B(-3, 0)



5) Work out the area of this triangle.



Week 7: Day 3 Answers

1) Complete these calculations:

a) $5 - 2.4 = 2.6$

b) $2.8 + 3.2 = 6$

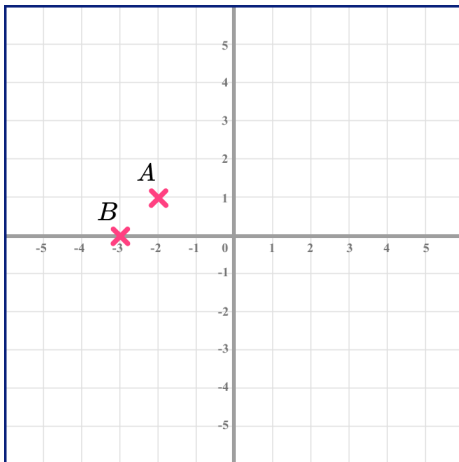
2) What is 17 lots of 19?

323

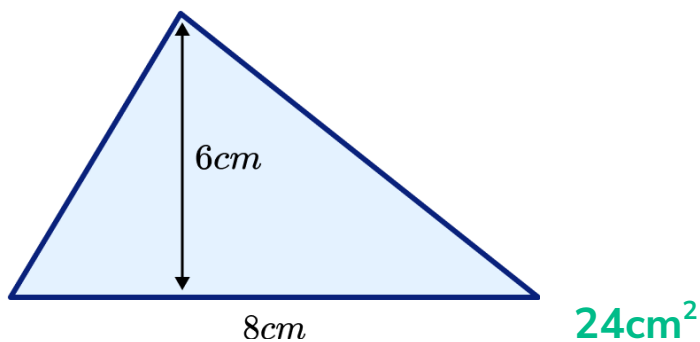
3) For what 2D shape does this formula give the area?

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

4) Plot: A(-2, 1) B(-3, 0)



5) Work out the area of this triangle.



Week 7: Day 4

1) Complete these calculations:

a) $2.5 - \underline{\quad} = 1.8$

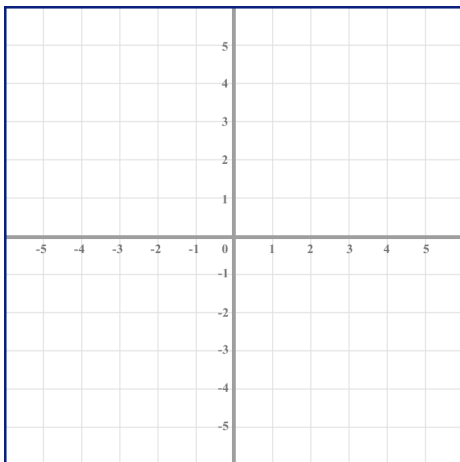
b) $\underline{\quad} - 3.25 = 1.75$

2) Determine the product of 98 and 3.

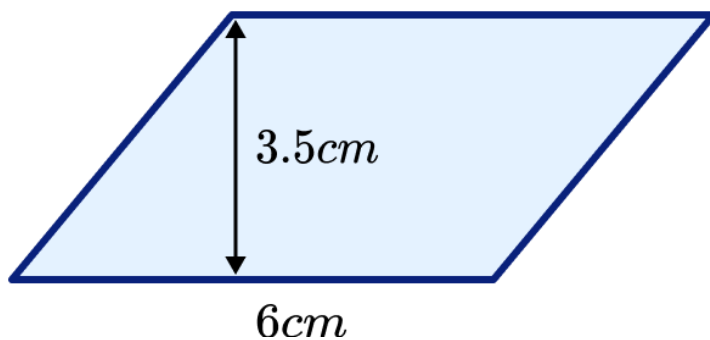
3) For what 2D shape does this formula give the area?

$$\text{Area} = l^2$$

4) Plot: A(-1, -4) B(-4, 1)



5) Calculate the area of this parallelogram.



Week 7: Day 4 Answers

1) Complete these calculations:

a) $2.5 - 0.7 = 1.8$

b) $5 - 3.25 = 1.75$

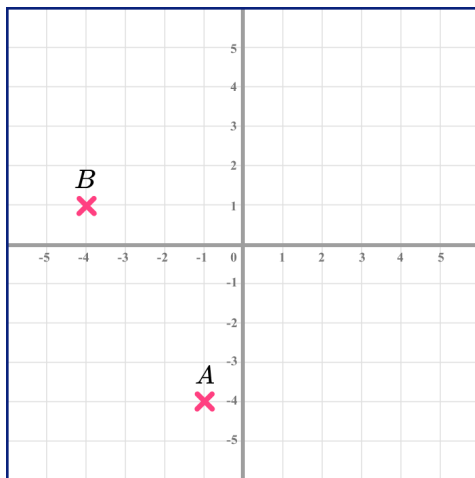
2) Determine the product of 98 and 3.

294

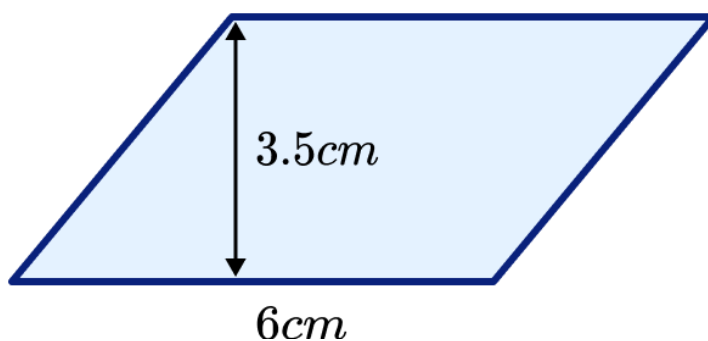
3) For what 2D shape does this formula give the area?

Area = l^2 square

4) Plot: A(-1, -4) B(-4, 1)



5) Calculate the area of this parallelogram.



21cm²

Week 7: Day 5

1) Complete these calculations:

a) $4.3 + \underline{\quad} = 6.4$

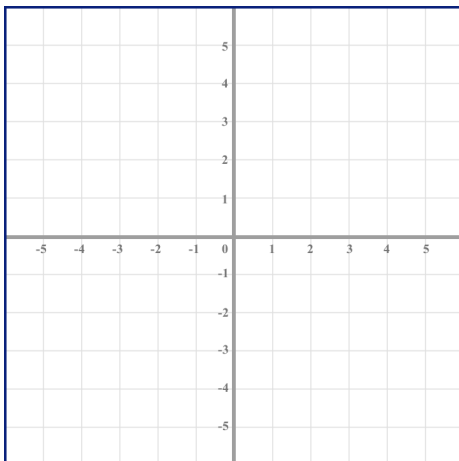
b) $\underline{\quad} - 3.7 = 5.2$

2) Multiply 45 by 5.

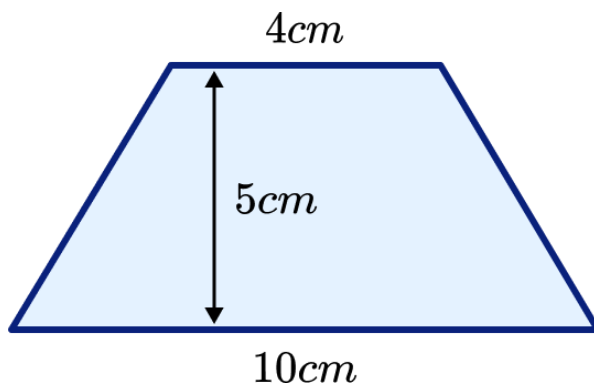
3) For what 2D shape does this formula give the area?

$$\text{Area} = \frac{1}{2}(a + b)h$$

4) Plot: A(-2, 0) B(-3, -1)



5) Work out the area of this trapezium.



Week 7: Day 5 Answers

1) Complete these calculations:

a) $4.3 + 2.1 = 6.4$

b) $8.9 - 3.7 = 5.2$

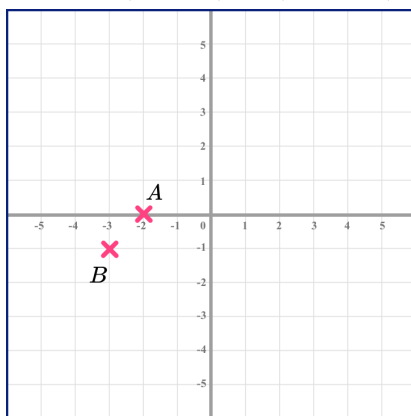
2) Multiply 45 by 5.

225

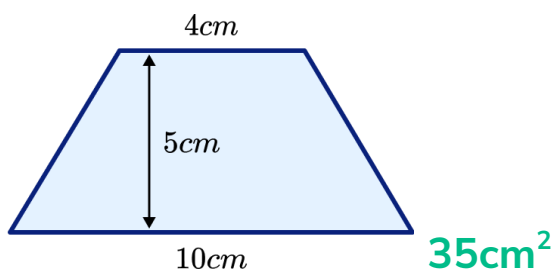
3) For what 2D shape does this formula give the area?

Area = $\frac{1}{2}(a + b)h$ **trapezium**

4) Plot: A(-2, 0) B(-3, -1)



5) Work out the area of this trapezium.



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