

Week 7

This week in a nutshell:

As it's the week back after half-term break, the topics this week have been seen before. They are all based around fundamental skills, and the questions contain ideas that will be useful in the coming weeks for fluency, confidence and success.

Question 1: Expressing a decimal as a fraction

Question 2: Mental arithmetic

Question 3: Factorising

Question 4: Area

Question 5: Rotations

The questions aim to develop and deepen understanding over the week. Due to the necessity of the topics covered this week, there is an emphasis on the interchangeability of command words, and language flexibility. It may be worth taking some extra time this week to make sure your students are developing their mathematical literacy.

This week's ideas for class discussion include:

Question 1: Expressing a decimal as a fraction

- Do you prefer to work with decimals or fractions? Why?
- Why is it important to be able to work with both fractions and decimals?

Question 2: Mental arithmetic

- Why is mental arithmetic necessary?

Question 3: Factorising

- What are your top tips for factorising?

Question 4: Area

- Does area only exist in 2D shapes

Question 5: Rotations

- What equipment makes rotations easier?

Week 7: Day 1

1) Write 0.45 as a fraction in its simplest terms.

2) Work out:

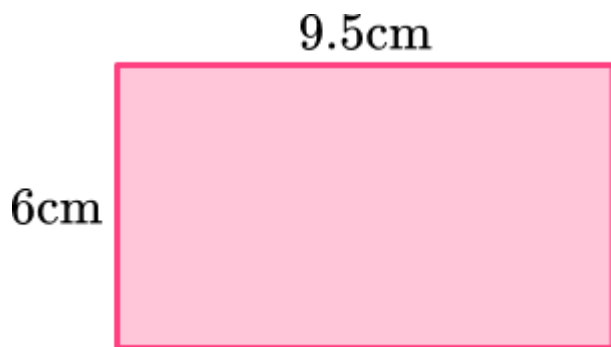
a) $14 \times 3 =$

b) $96 \div 8 =$

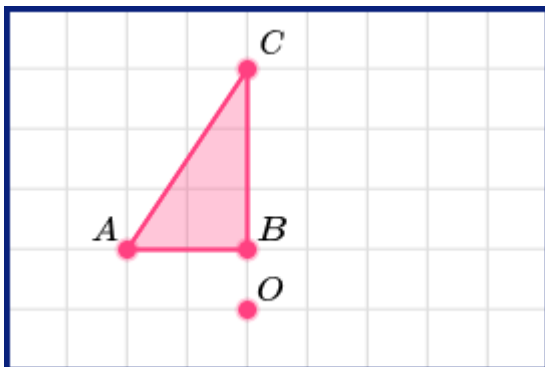
3) Fully factorise:

$$5y - 10 =$$

4) Determine the area of this rectangle:



5) Rotate triangle ABC 90° clockwise about point O .



Week 7: Day 1 Answers

- 1) Write 0.45 as a fraction in its simplest terms. $\frac{9}{20}$

- 2) Work out:

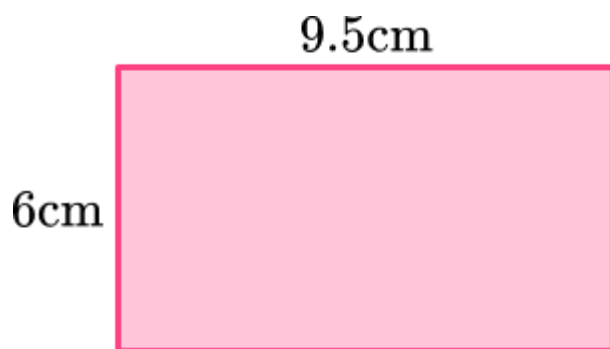
a) $14 \times 3 = 42$

b) $96 \div 8 = 12$

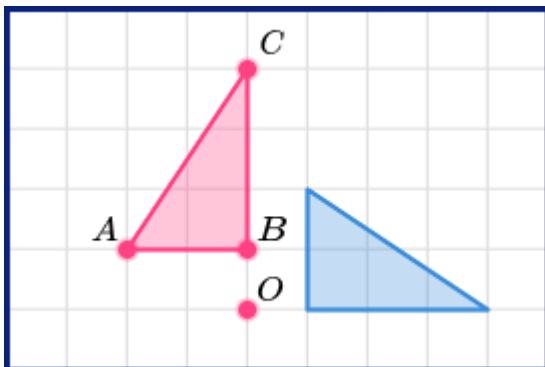
- 3) Fully factorise:

$$5y - 10 = 5(y - 2)$$

- 4) Determine the area of this rectangle: 57cm^2



- 5) Rotate triangle ABC 90° clockwise about point O .



Week 7: Day 2

1) Write 0.306 as a fraction in its simplest terms.

2) Work out:

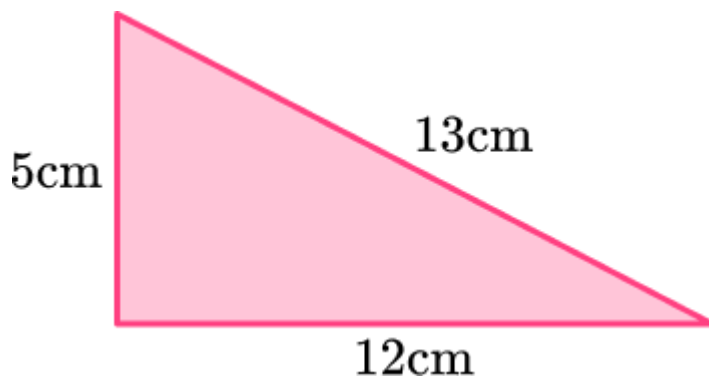
a) $29 + 37 =$

b) $82 - 18 =$

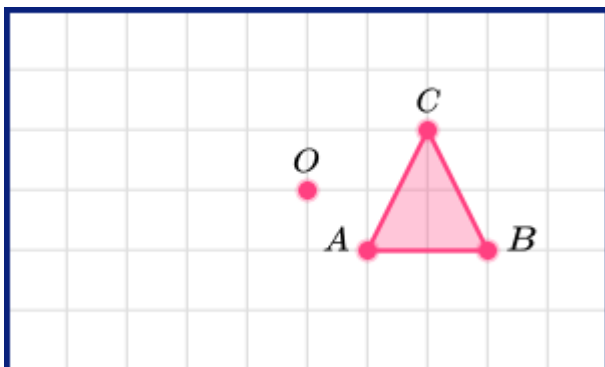
3) Fully factorise:

$$8b + 4 =$$

4) What is the area of this triangle?



5) Rotate triangle ABC 180° about point O .



Week 7: Day 2 Answers

- 1) Write 0.306 as a fraction in its simplest terms. $\frac{153}{500}$

- 2) Work out:

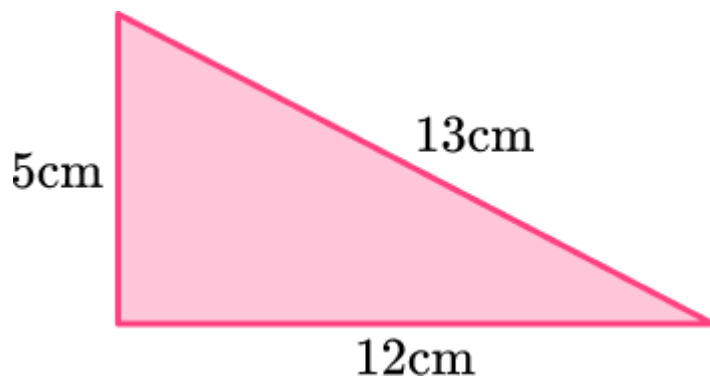
a) $29 + 37 = 66$

b) $82 - 18 = 64$

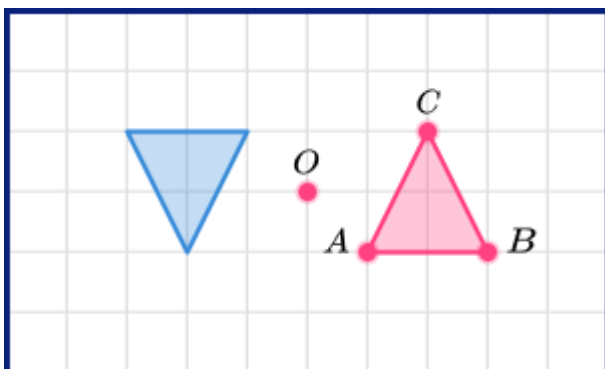
- 3) Fully factorise:

$$8b + 4 = 4(2b + 1)$$

- 4) What is the area of this triangle? 30cm^2



- 5) Rotate triangle ABC 180° about point O .



Week 7: Day 3

1) Write 0.84 as a fraction in its simplest terms.

2) Work out:

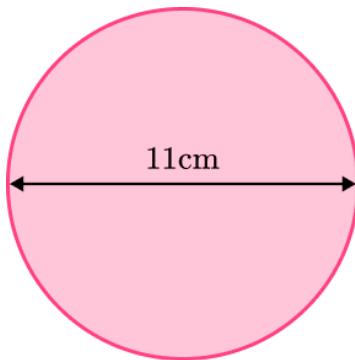
a) $9 \times 13 =$

b) $42 + 49 =$

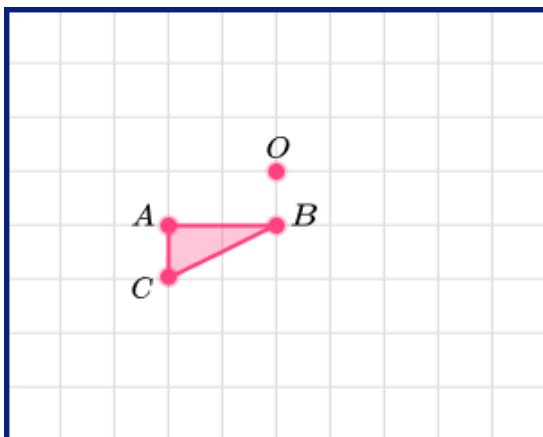
3) Fully factorise:

$$6ab - 4b =$$

4) Calculate the area of this circle, giving your answer rounded to two decimal places:



5) Rotate triangle ABC 270° clockwise about point O .



Week 7: Day 3 Answers

- 1) Write 0.84 as a fraction in its simplest terms. $\frac{21}{25}$

- 2) Work out:

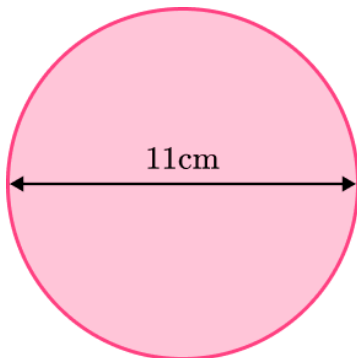
a) $9 \times 13 = 117$

b) $42 + 49 = 91$

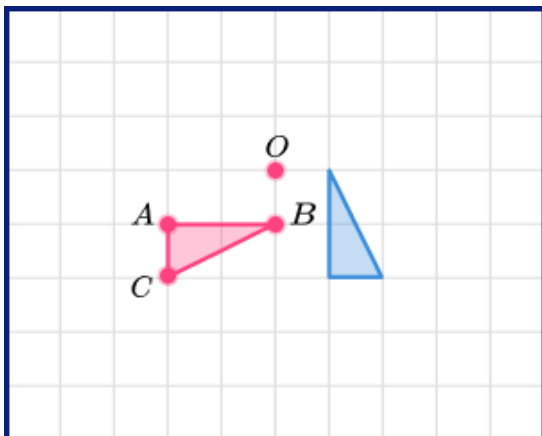
- 3) Fully factorise:

$$6ab - 4b = 2b(3a - 2)$$

- 4) Calculate the area of this circle, giving your answer rounded to two decimal places: 95.03cm^2



- 5) Rotate triangle ABC 270° clockwise about point O .



Week 7: Day 4

1) Write 0.08 as a fraction in its simplest terms.

2) Work out:

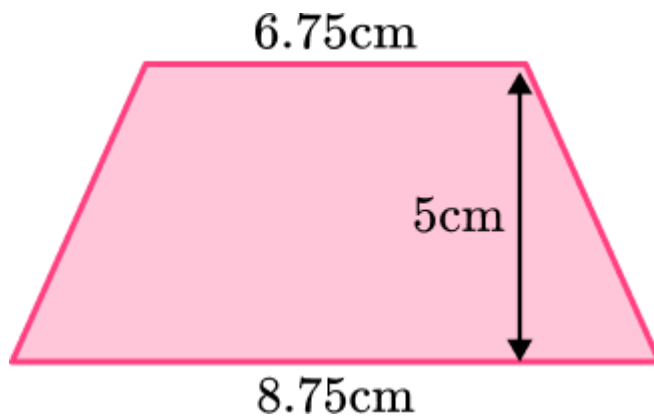
a) $56 \div 7 =$

b) $61 - 39 =$

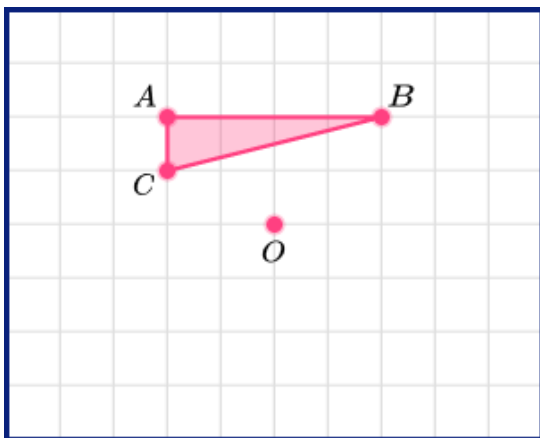
3) Fully factorise:

$$10m + 6n - 8 =$$

4) Given that the shape below is an isosceles trapezium, find its area.



5) Rotate triangle ABC 90° anti-clockwise about point O .



Week 7: Day 4 Answers

- 1) Write 0.08 as a fraction in its simplest terms. $\frac{2}{25}$

- 2) Work out:

a) $56 \div 7 = 8$

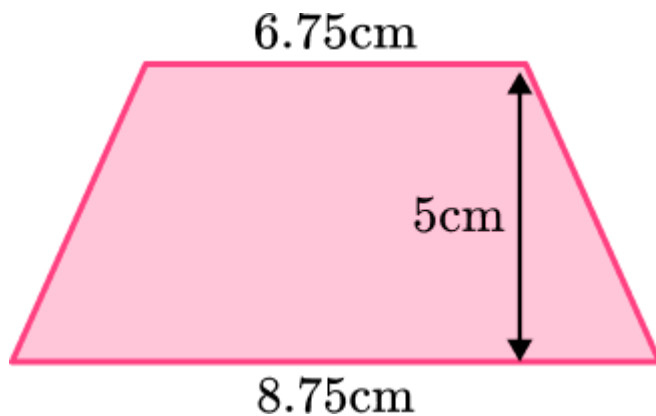
b) $61 - 39 = 22$

- 3) Fully factorise:

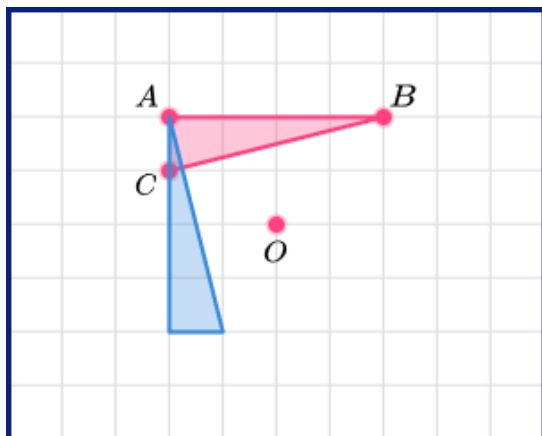
$$10m + 6n - 8 = 2(5m + 3n - 4)$$

- 4) Given that the shape below is an isosceles trapezium, find its area.

38.75cm^2



- 5) Rotate triangle ABC 90° anti-clockwise about point O .



Week 7: Day 5

1) Write 0.625 as a fraction in its simplest terms.

2) **Work out:**

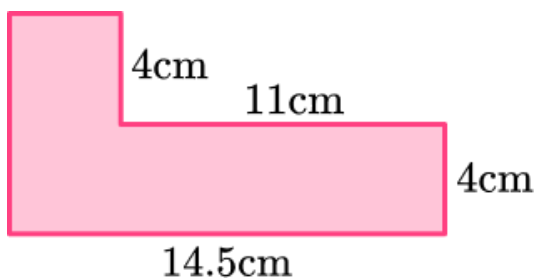
a) $104 - 55 =$

b) $132 \div 11 =$

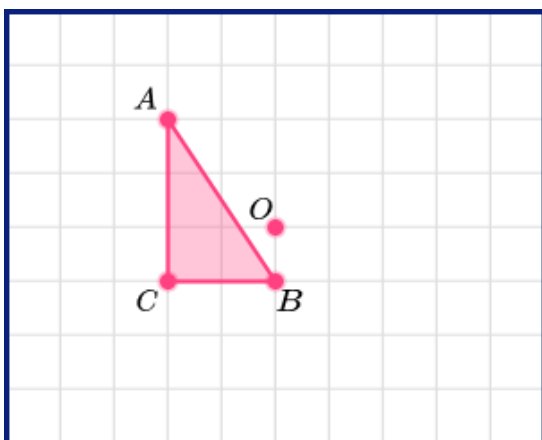
3) **Fully factorise:**

$$9m^2 - 12m =$$

4) What is the area of the shape below?



5) Rotate triangle ABC 180° about point O .



Week 7: Day 5 Answers

- 1) Write 0.625 as a fraction in its simplest terms. $\frac{5}{8}$

- 2) Work out:

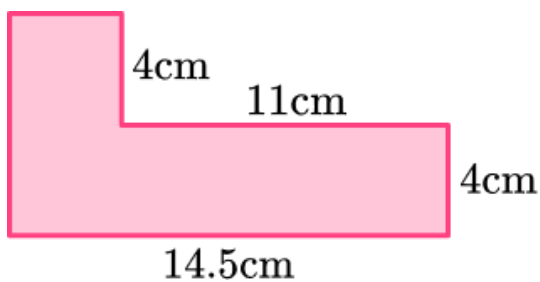
a) $104 - 55 = 49$

b) $132 \div 11 = 12$

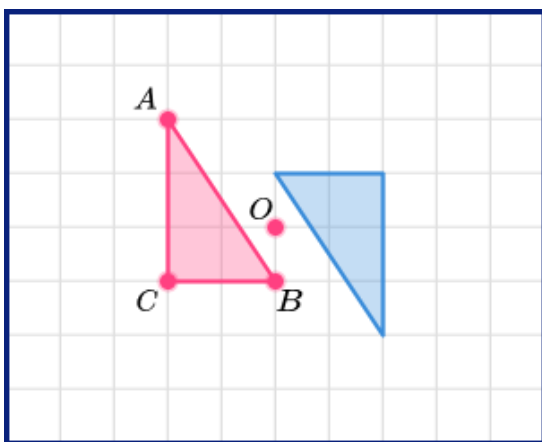
- 3) Fully factorise:

$$9m^2 - 12m = 3m(3m - 4)$$

- 4) What is the area of the shape below? 72cm^2



- 5) Rotate triangle ABC 180° about point O .



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