

Week 9

This week in a nutshell:

The questions from this week continue to build on the material from previous weeks and so students may wish to review previously seen material before attempting the questions from this week. Students attempting question 4 may require tracing paper to help them to visualise the question.

Question 1: Comparing fractions and decimals

Question 2: Metric units

Question 3: BIDMAS

Question 4: Order of rotational symmetry

Question 5: Plotting coordinates

This week's ideas for class discussion include:

Question 1: **Comparing fractions and decimals**

- What would your advice be for someone comparing fractions and decimals?

Question 2: **Metric units**

- Where do the metric prefixes originate?

Question 3: **BIDMAS**

- What would happen if we didn't use BIDMAS?

Question 4: **Order of rotational symmetry**

- Why do you think we use the word "order"?
- What equipment is useful when dealing with rotational symmetry?

Question 5: **Plotting coordinates**

- Could coordinates exist in other contexts?

Week 9: Day 1

- 1) Use $<$, $>$ or $=$ to fill the box.

$$\frac{1}{4} \quad \square \quad 0.2$$

- 2) Make this unit conversion correct:

$$37\text{mm} = \underline{\hspace{1cm}}\text{cm}$$

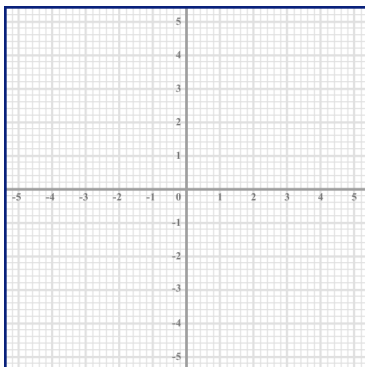
- 3) Calculate

$$3 + 5 \times 7 =$$

- 4) State the order of rotational symmetry.



- 5) Plot: A(1, 2) , B(-2, 3)



Week 9: Day 1 Answers

- 1) Use <, > or = to fill the box.

$$\frac{1}{4} \boxed{>} 0.2$$

- 2) Make this unit conversion correct:

$$37\text{mm} = 3.7\text{cm}$$

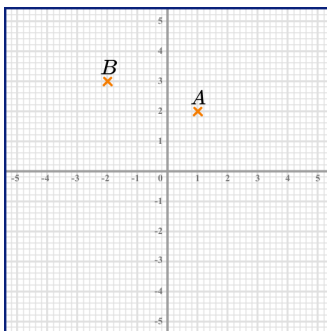
- 3) Calculate

$$\begin{aligned} 3 + 5 \times 7 &= 3 + 35 \\ &= 38 \end{aligned}$$

- 4) State the order of rotational symmetry. 2



- 5) Plot: A(1, 2) , B(-2, 3)



Week 9: Day 2

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.45 \boxed{} \frac{9}{20}$$

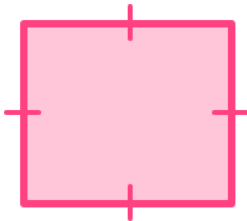
- 2) Make this unit conversion correct:

$$375\text{cm} = \underline{\hspace{2cm}}\text{m}$$

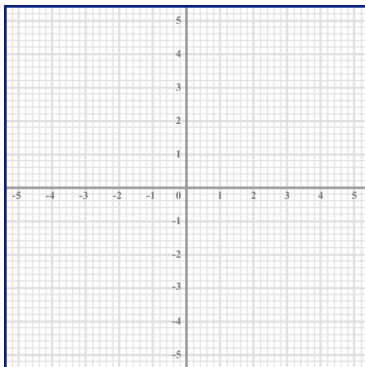
- 3) Calculate

$$24 \div (11 - 3) =$$

- 4) State the order of rotational symmetry.



- 5) Plot: A(3, 4) , B(2, -3)



Week 9: Day 2 Answers

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.45 \boxed{=} \frac{9}{20}$$

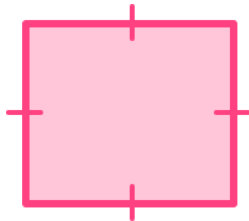
- 2) Make this unit conversion correct:

$$375\text{cm} = 3.75\text{m}$$

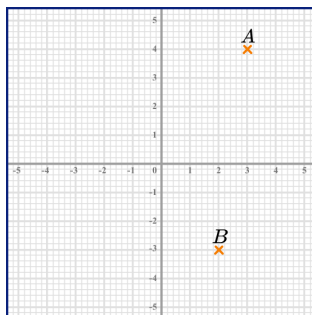
- 3) Calculate

$$24 \div (11 - 3) = 24 \div 8 \\ = 3$$

- 4) State the order of rotational symmetry. 4



- 5) Plot: A(3, 4), B(2, -3)



Week 9: Day 3

- 1) Use $<$, $>$ or $=$ to fill the box.

$$\frac{4}{7} \quad \square \quad 0.51$$

- 2) Make this unit conversion correct:

$$37500\text{m} = \underline{\hspace{2cm}} \text{km}$$

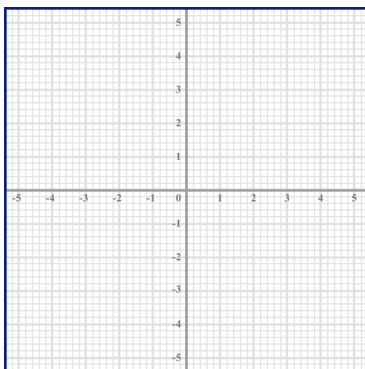
- 3) Calculate

$$(3 + 2)^2 \div 25 =$$

- 4) State the order of rotational symmetry.



- 5) Plot: A(-4, 4) , B(2, -2)



Week 9: Day 3 Answers

- 1) Use <, > or = to fill the box.

$$\frac{4}{7} \boxed{>} 0.51$$

- 2) Make this unit conversion correct:

$$37500\text{m} = 37.5\text{km}$$

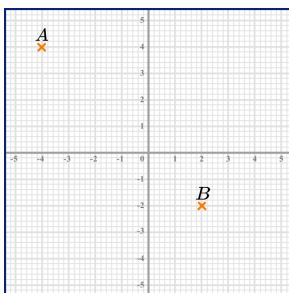
- 3) Calculate

$$\begin{aligned}(3 + 2)^2 \div 25 &= 5^2 \div 25 \\ &= 25 \div 25 \\ &= 1\end{aligned}$$

- 4) State the order of rotational symmetry. 5



- 5) Plot: A(-4, 4) , B(2, -2)



Week 9: Day 4

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.84 \square \frac{17}{20}$$

- 2) Make this unit conversion correct:

$$0.48\text{m} = \text{ ______ } \text{mm}$$

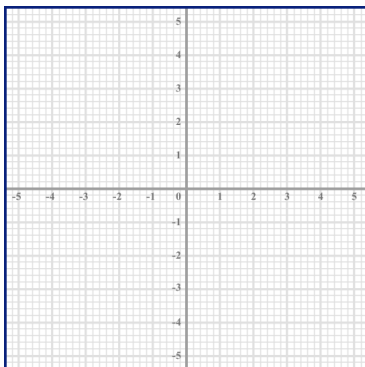
- 3) Calculate

$$(2^2 + 3^2) - 5 \times 6 =$$

- 4) State the order of rotational symmetry.



- 5) Plot: A(4, 0) , B(-2.5, 3)



Week 9: Day 4 Answers

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.84 \boxed{<} \frac{17}{20}$$

- 2) Make this unit conversion correct:

$$0.48\text{m} = 480\text{mm}$$

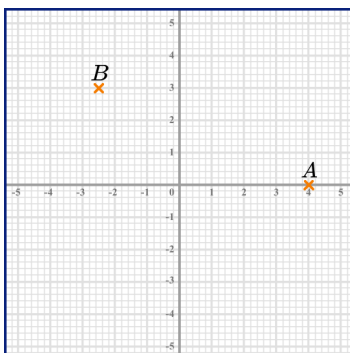
- 3) Calculate

$$\begin{aligned}(2^2 + 3^2) - 5 \times 6 &= (4 + 9) - 30 \\ &= 13 - 30 \\ &= -17\end{aligned}$$

- 4) State the order of rotational symmetry. No rotational symmetry



- 5) Plot: A(4, 0) , B(-2.5, 3)



Week 9: Day 5

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.65 \boxed{} \frac{5}{8}$$

- 2) Make this unit conversion correct:

$$2490\text{mm} = \underline{\hspace{2cm}}\text{m}$$

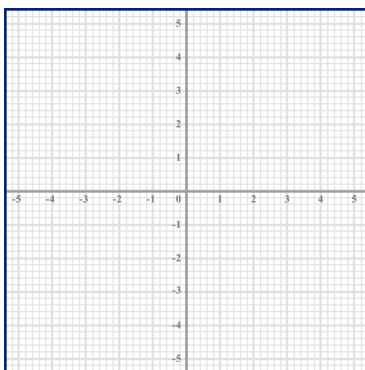
- 3) Calculate

$$20 - 3^2 \times 2 =$$

- 4) State the order of rotational symmetry.



- 5) Plot: A(3.5, 0) , B(0, -3)



Week 9: Day 5 Answers

- 1) Use $<$, $>$ or $=$ to fill the box.

$$0.65 \boxed{>} \frac{5}{8}$$

- 2) Make this unit conversion correct:

$$2490\text{mm} = 2.49\text{m}$$

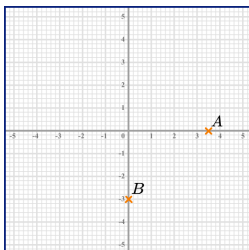
- 3) Calculate

$$\begin{aligned} 20 - 3^2 \times 2 &= 20 - 9 \times 2 \\ &= 20 - 18 \\ &= 2 \end{aligned}$$

- 4) State the order of rotational symmetry. **infinite**



- 5) Plot: A(3.5, 0) , B(0, -3)



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