

Week 11

This week in a nutshell:

Approaching the end of the year sees us revisit some useful topics. Questions 4 and 5 are from recently seen topics and could be used as interesting discussion points on the mathematics involved, but also in terms of aesthetics and design.

Question 1: Decimals, fractions and mixed numbers

Question 2: Linear relationships

Question 3: Listing factors

Question 4: Translating a shape

Question 5: Lines of symmetry

This week's ideas for class discussion include:

Question 1: **Decimals, fractions and mixed numbers**

- Which number representation is your favourite to work with? Why?
- Why is fluidity between representations important?

Question 2: **Linear relationships**

- What makes a relationship linear?

Question 3: **Listing factors**

- How do you know that you have found all factors in an efficient way?

Question 4: **Translating a shape**

- What do you need in order to translate a shape accurately?

Question 5: **Lines of symmetry**

- Is symmetry natural or something humans created?

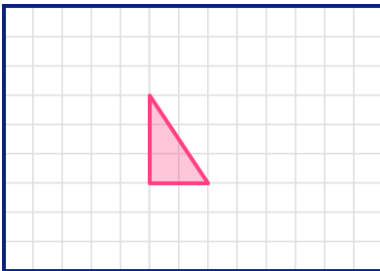
Week 11: Day 1

1) Write $\frac{3}{2}$ as a decimal.

2) If $x = 3$, find the value of y when
 $y = 2x - 5$

3) List the factors of 12.

4) Translate the triangle 3 to the right and 2 up.



5) How many lines of symmetry does this flag have?



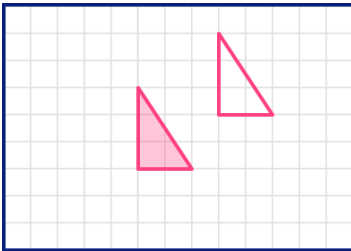
Week 11: Day 1 Answers

1) Write $\frac{3}{2}$ as a decimal. **1.5**

2) If $x = 3$, find the value of y when **1**
 $y = 2x - 5$

3) List the factors of 12. **1, 2, 3, 4, 6, 12**

4) Translate the triangle 3 to the right and 2 up.



5) How many lines of symmetry does this flag have? **1**



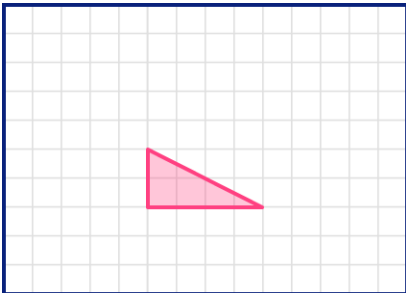
Week 11: Day 2

1) Write 3.4 as a mixed number.

2) If $x = -2$, find the value of y when
 $y = 2x + 3$

3) List the factors of 36.

4) Translate the triangle 2 to the left and 4 up.



5) How many lines of symmetry does this flag have?



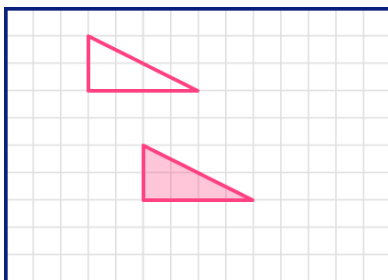
Week 11: Day 2 Answers

1) Write 3.4 as a mixed number. $3\frac{2}{5}$

2) If $x = -2$, find the value of y when -1
 $y = 2x + 3$

3) List the factors of 36. $1, 2, 3, 4, 6, 9, 12, 18, 36$

4) Translate the triangle 2 to the left and 4 up.



5) How many lines of symmetry does this flag have? 0



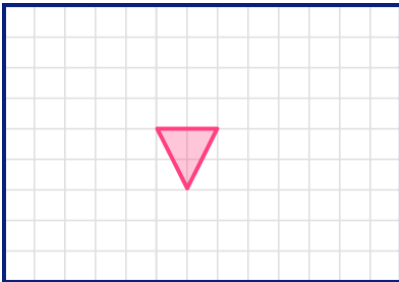
Week 11: Day 3

1) Write 1.2 as an improper fraction.

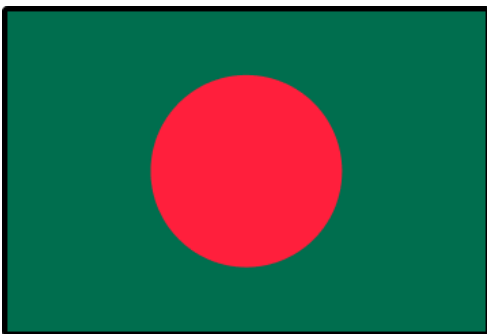
2) If $x = -3$, find the value of y when
 $y = 1 - 2x$

3) List the factors of 27.

4) Translate the triangle 4 to the right and 2 down.



5) How many lines of symmetry does this flag have?



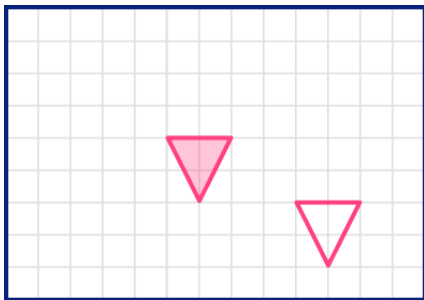
Week 11: Day 3 Answers

1) Write 1.2 as an improper fraction. $\frac{6}{5}$

2) If $x = -3$, find the value of y when 7
 $y = 1 - 2x$

3) List the factors of 27. $1, 3, 9, 27$

4) Translate the triangle 4 to the right and 2 down.



5) How many lines of symmetry does this flag have? 2



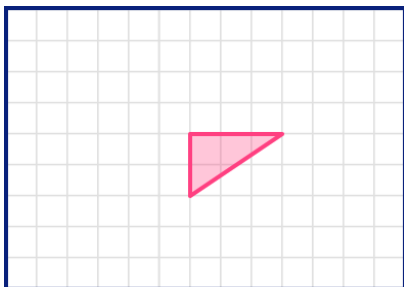
Week 11: Day 4

1) Write $\frac{8}{5}$ as a decimal.

2) If $x = 0$, find the value of y when
 $x + y = 5$

3) List the factors of 60.

4) Translate the triangle using the vector $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$



5) How many lines of symmetry does this flag have?



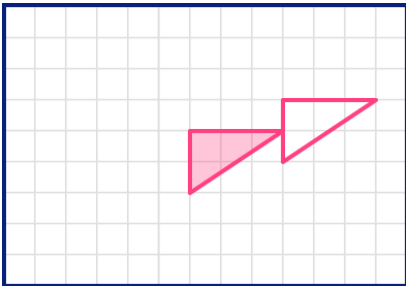
Week 11: Day 4 Answers

1) Write $\frac{8}{5}$ as a decimal. **1.6**

2) If $x = 0$, find the value of y when **5**
 $x + y = 5$

3) List the factors of 60. **1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60**

4) Translate the triangle using the vector $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$



5) How many lines of symmetry does this flag have? **2**



Week 11: Day 5

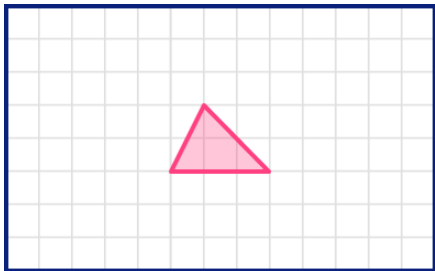
1) Write 4.6 as an improper fraction.

2) If $x = 6$, find the value of y when

$$y = \frac{x}{2} + 3$$

3) List the factors of 72.

4) Translate the triangle using the vector $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$



5) How many lines of symmetry does this flag have?



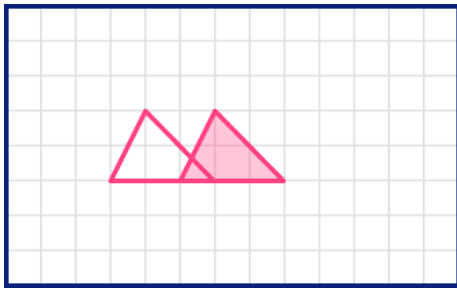
Week 11: Day 5 Answers

1) Write 4.6 as an improper fraction. $\frac{23}{5}$

2) If $x = 6$, find the value of y when 6
 $y = \frac{x}{2} + 3$

3) List the factors of 72. 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

4) Translate the triangle using the vector $\begin{pmatrix} -2 \\ 0 \end{pmatrix}$



5) How many lines of symmetry does this flag have? 2



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