

## Week 8

### This week in a nutshell:

The main skills in use this week should now be fluent and misconception free; it is, however, well worth making sure this is the case periodically so discuss these topics with a few probing questions. Students should be reminded that knowing rules for angles in triangles allows quotable justification in their reasoning. Recognising multiples can be made more efficient by elaborating on the rules of divisibility for different numbers.

**Question 1:** Converting a fraction to a decimal

**Question 2:** Factorising linear expressions

**Question 3:** Direct proportion

**Question 4:** Angles in triangles

**Question 5:** Recognising multiples

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: **Converting a fraction to a decimal**

- Can every fraction be written as a terminating decimal?
- Can every fraction be written as a decimal?

Question 2: **Factorising linear expressions**

- Is there a better name for this process than “factorising”?

Question 3: **Direct proportion**

- \*reflect on previous learning\*

Question 4: **Angles in triangles**

- “Triangles form the basis of all other polygons”- convince me otherwise.

Question 5: **Recognising multiples**

- What rules have you learned for identifying multiples?

## Week 8: Day 1

- 1) Write the fraction as a decimal number:

$$\frac{3}{5} =$$

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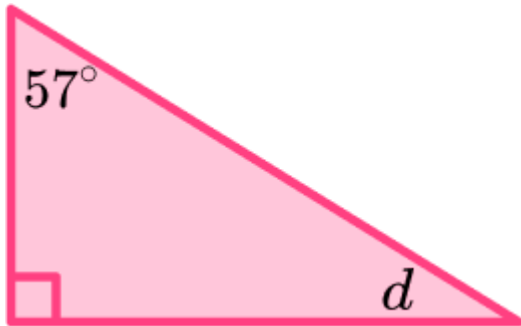
- 2) Factorise fully:

$$9x + 15 =$$

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- 3) A recipe requires 3 eggs to make 7 cupcakes. How many eggs will be needed to make 14 cupcakes?
- 

- 4) Work out the size of angle  $d$ .



- 5) Identify the numbers that are multiples of 3.

312

431

297

733

## Week 8: Day 1 Answers

- 1) Write the fraction as a decimal number:

$$\frac{3}{5} = 0.6$$

- 2) Factorise fully:

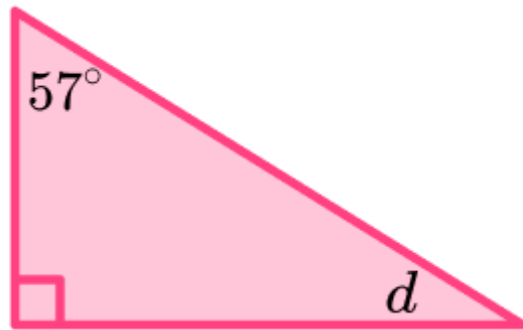
$$9x + 15 = 3(3x + 5)$$

- 3) A recipe requires 3 eggs to make 7 cupcakes. How many eggs will be needed to make 14 cupcakes?

6 eggs

- 4) Work out the size of angle  $d$ .

33°



- 5) Identify the numbers that are multiples of 3.

312

431

297

733

## Week 8: Day 2

- 1) Write the fraction as a decimal number:

$$\frac{1}{16} =$$

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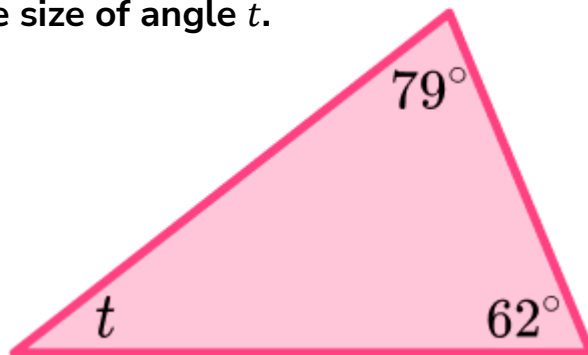
- 2) Factorise fully:

$$20 - 16x =$$

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- 3) A bottling machine fills 48 bottles in 12 minutes. How many bottles will it fill in 16 minutes?
- 

- 4) Work out the size of angle  $t$ .



- 5) Identify the numbers that are multiples of 4.

2482

1284

878

948

## Week 8: Day 2 Answers

- 1) Write the fraction as a decimal number:

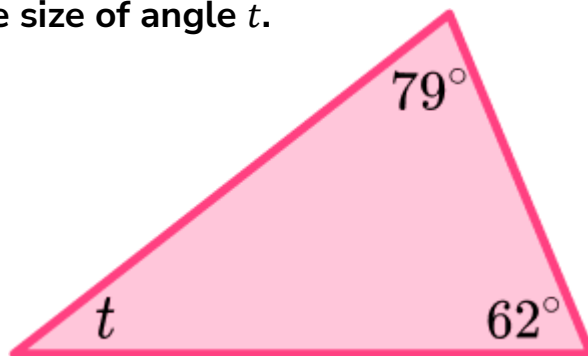
$$\frac{1}{16} = 0.0625$$

- 2) Factorise fully:

$$20 - 16x = 4(5 - 4x)$$

- 3) A bottling machine fills 48 bottles in 12 minutes. How many bottles will it fill in 16 minutes? 64 bottles

- 4) Work out the size of angle  $t$ .  
39°



- 5) Identify the numbers that are multiples of 4.

2482

1284

878

948

## Week 8: Day 3

- 1) Write the fraction as a decimal number:

$$\frac{13}{50} =$$

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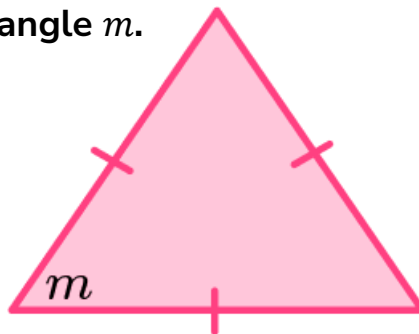
- 2) Factorise fully:

$$8x - 12 =$$

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- 3) A recipe for pastry requires 160g of sugar to make 320g of pastry. How many grams of sugar will be needed to make 40g of pastry?
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- 4) Work out the size of angle  $m$ .



- 5) Identify the numbers that are multiples of 6.

406

564

286

674

## Week 8: Day 3 Answers

- 1) Write the fraction as a decimal number:

$$\frac{13}{50} = 0.26$$

- 2) Factorise fully:

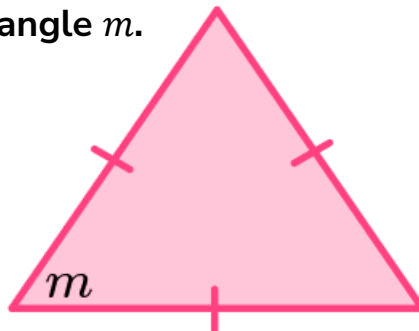
$$8x - 12 = 4(2x - 3)$$

- 3) A recipe for pastry requires 160g of sugar to make 320g of pastry. How many grams of sugar will be needed to make 40g of pastry?

20g

- 4) Work out the size of angle  $m$ .

60°



- 5) Identify the numbers that are multiples of 6.

406

564

286

674

## Week 8: Day 4

- 1) Write the fraction as a decimal number:

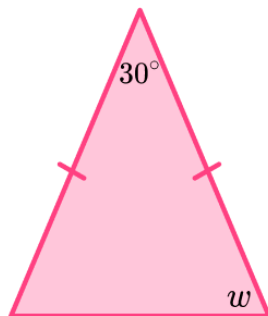
$$\frac{17}{25} =$$

- 2) Factorise fully:

$$2ab + 4a =$$

- 3) If I can run 8km in 44 minutes, how far can I run in 77 minutes?

- 4) Work out the size of angle  $w$ .



- 5) Identify the numbers that are multiples of 11.

844

611

682

781



## Week 8: Day 4 Answers

- 1) Write the fraction as a decimal number:

$$\frac{17}{25} = 0.68$$

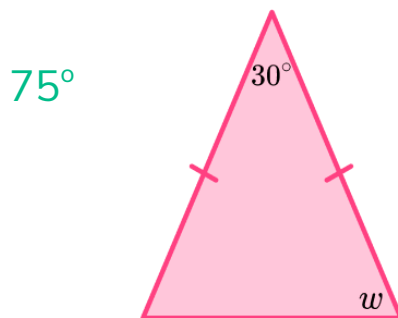
- 2) Factorise fully:

$$2ab + 4a = 2a(b + 2)$$

- 3) If I can run 8km in 44 minutes, how far can I run in 77 minutes?

14km

- 4) Work out the size of angle  $w$ .



- 5) Identify the numbers that are multiples of 11.

844

611

682

781

## Week 8: Day 5

- 1) Write the fraction as a decimal number:

$$\frac{7}{8} =$$

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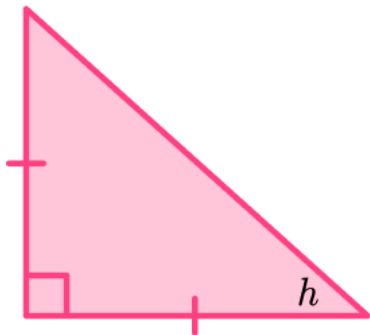
- 2) Factorise fully:

$$6a + 18b - 9c =$$

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- 3) Twenty flapjacks require 600g of oats. How many flapjacks can be made with 960g of oats?
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- 4) Work out the size of angle  $h$ .



- 5) Identify the numbers that are multiples of 9.

708

549

1008

644

## Week 8: Day 5 Answers

- 1) Write the fraction as a decimal number:

$$\frac{7}{8} = 0.875$$

- 2) Factorise fully:

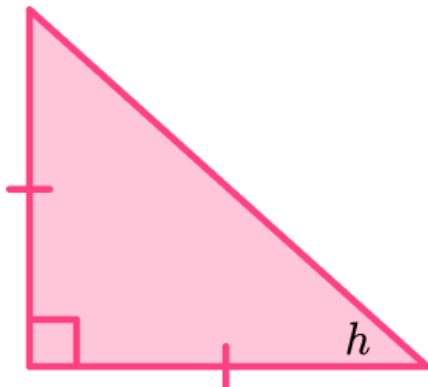
$$6a + 18b - 9c = 3(2a + 6b - 3c)$$

- 3) Twenty flapjacks require 600g of oats. How many flapjacks can be made with 960g of oats?

32

- 4) Work out the size of angle  $h$ .

45°



- 5) Identify the numbers that are multiples of 9.

708

549

1008

644

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