

Week 8

This week in a nutshell:

The skills and topics revisited in week 2 cover number, algebra, geometry, and probability & statistics. Given the breadth of knowledge required this week, students may need extra time for information retrieval. You may consider it appropriate for some students to have glossaries or notes available when completing the questions.

Question 1: Substitution and BIDMAS

Question 2: Prime factor decomposition

Question 3: Basic probability

Question 4: Angle rules

Question 5: Charts and diagrams

There are no suggestions for discussion this half term. As the topics are revision of previously covered material, any conversations should be used to deal with remaining difficulties or misconceptions that arise during the week.

Week 8: Day 1

1) Given $a=3$ and $b=5$

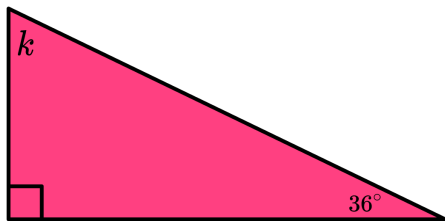
a) $2a + b =$

b) $ab =$

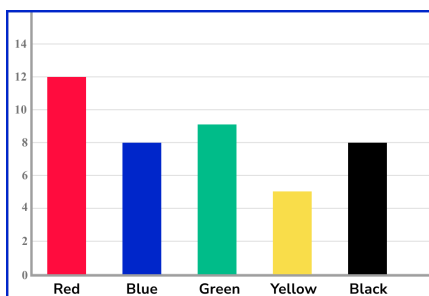
2) Write 30 as a product of its prime factors.

3) What is the probability of scoring a number greater than 4 with one roll of a die?

4) Calculate the size of angle k .



5) Which two colours are preferred by the same number of children?



Week 8: Day 1 Answers

1) Given $a=3$ and $b=5$

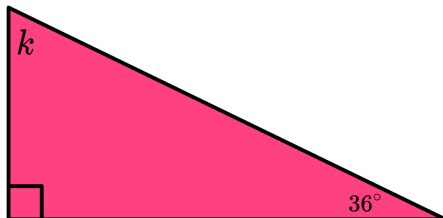
a) $2a + b = 11$

b) $ab = 15$

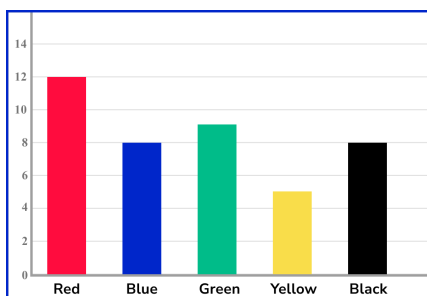
2) Write 30 as a product of its prime factors. $2 \times 3 \times 5$

3) What is the probability of scoring a number greater than 4 with one roll of a die? $\frac{1}{3}$

4) Calculate the size of angle k . 54°



5) Which two colours are preferred by the same number of children?



Blue and black

Week 8: Day 2

1) Given $a=4$ and $b=7$

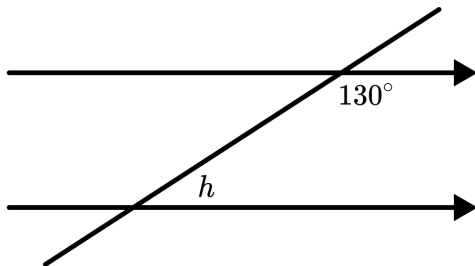
a) $5a - 2b =$

b) $2ab =$

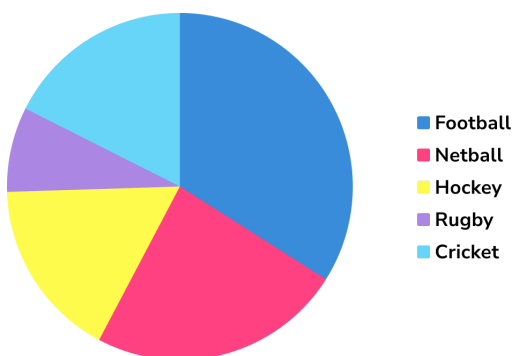
2) Write 70 as a product of its prime factors.

3) What is the probability of choosing an ace from a standard deck of cards?

4) Determine the size of angle h .



5) Which is the least popular sport?



Week 8: Day 2 Answers

1) Given $a=4$ and $b=7$

a) $5a - 2b = 6$

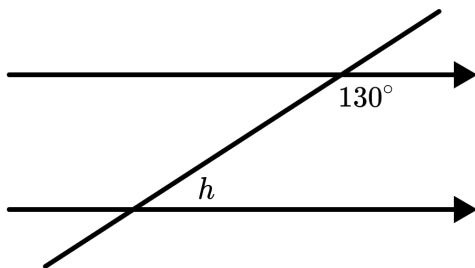
b) $2ab = 56$

2) Write 70 as a product of its prime factors. $2 \times 5 \times 7$

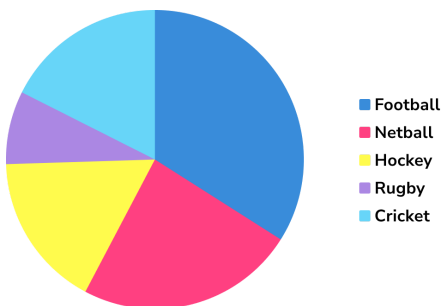
3) What is the probability of choosing an ace from a standard deck of cards?

$$\frac{1}{13}$$

4) Determine the size of angle h . 50°



5) Which is the least popular sport? **Rugby**



Week 8: Day 3

1) Given $m=12$ and $n=3$

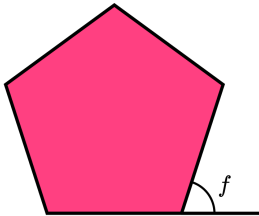
a) $2m \div 8n =$

b) $2(m + n) =$

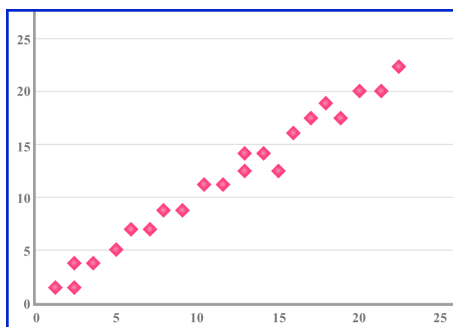
2) Write 24 as a product of its prime factors using index notation.

3) What is the probability of choosing a red queen from a standard deck of cards?

4) Work out the size of angle f , which is the exterior angle of a regular pentagon.



5) Describe the type of relationship seen in this scatter diagram.



Week 8: Day 3 Answers

1) Given $m=12$ and $n=3$

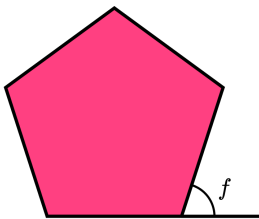
a) $2m \div 8n = 1$

b) $2(m + n) = 30$

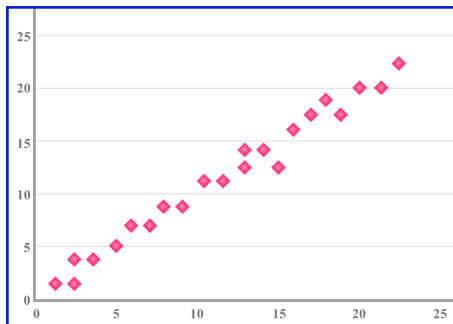
2) Write 24 as a product of its prime factors using index notation. $2^3 \times 3$

3) What is the probability of choosing a red queen from a standard deck of cards? $\frac{1}{26}$

4) Work out the size of angle f , which is the exterior angle of a regular pentagon. 72°



5) Describe the type of relationship seen in this scatter diagram.



Strong positive correlation

Week 8: Day 4

1) Given $m=1$, $n=2$ and $p=5$

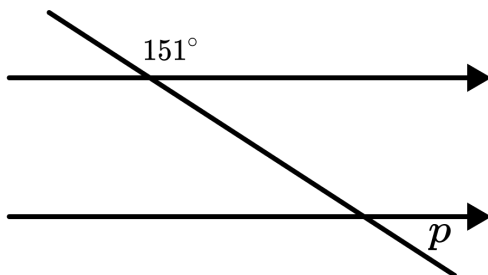
a) $mnp =$

b) $p(m + 2n) =$

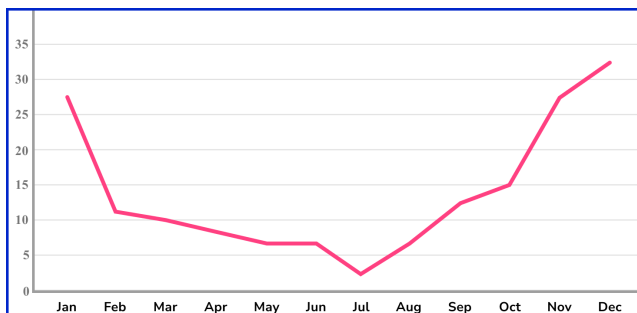
2) Write 36 as a product of its prime factors using index notation.

3) When flipping a fair coin, you get heads 5 times in a row. What is the probability you get heads on the next flip?

4) Work out the size of angle p .



5) In which month were sales of waterproof trousers at their lowest?



Week 8: Day 4 Answers

1) Given $m=1$, $n=2$ and $p=5$

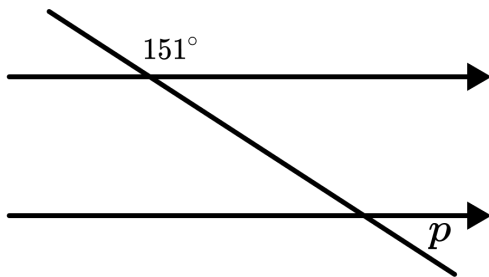
a) $mnp = 10$

b) $p(m + 2n) = 25$

2) Write 36 as a product of its prime factors using index notation. $2^2 \times 3^2$

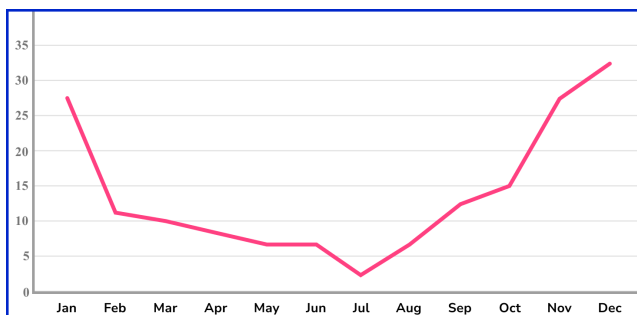
3) When flipping a fair coin, you get heads 5 times in a row. What is the probability you get heads on the next flip? $\frac{1}{2}$

4) Work out the size of angle p . 29°



5) In which month were sales of waterproof trousers at their lowest?

July



Week 8: Day 5

1) Given $a=3$, $b=4$ and $c=6$

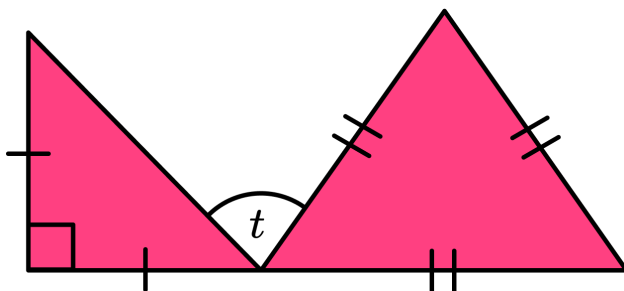
a) $2(a + b) - c =$

b) $a^2(c - b) =$

2) Write 64 as a product of its prime factors using index notation.

3) What is the probability of rolling a 6 twice in a row with a fair 6-sided die?

4) Calculate the size of angle t .



5) Complete the 2-way table.

	Maths	PE	Total
Boys	12		
Girls			25
Total	29		91

Week : Day 5 Answers

1) Given $a=3$, $b=4$ and $c=6$

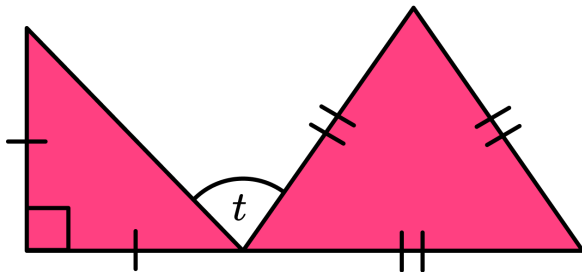
a) $2(a + b) - c = 8$

b) $a^2(c - b) = 18$

2) Write 64 as a product of its prime factors using index notation. 2^6

3) What is the probability of rolling a 6 twice in a row with a fair 6-sided die? $\frac{1}{36}$

4) Calculate the size of angle t . 75°



5) Complete the 2-way table.

	Maths	PE	Total
Boys	12	54	66
Girls	17	8	25
Total	29	62	91

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