

S1 Block 3 Assessment Revision – Non Calc

Factors, Multiples, Primes and Squares

1. Write down all the factors of
 - a) 6
 - b) 18
 - c) 144

2. Write down all the multiples of 6 between 32 and 83

3. List all the primes between 8 and 30

4. Write down all the square numbers between 25 and 100

5. List all the square numbers between 15 and 56.

6. List all the prime numbers between 15 and 56

7. Write the multiples of 8 between 9 and 65.

8. Calculate:

a) $6^2 + 4^2$ b) $8^2 + 3^2$ c) $6^2 + 4^3$ d) $5^2 - 3^3$

e) $9^2 - 8^2$ f) $\sqrt{81}$ g) $\sqrt{100}$ h) $\sqrt{9}$

9. Write the following numbers as a product of prime factors

a) 14 b) 30 c) 88 d) 105

1. You may use a calculator for this question

For this data:

20 47 32 19 47 34 60

Calculate:

a) Mean

b) Median

c) Mode

d) Range

2. The heights of runner beans in a garden were (in cm)

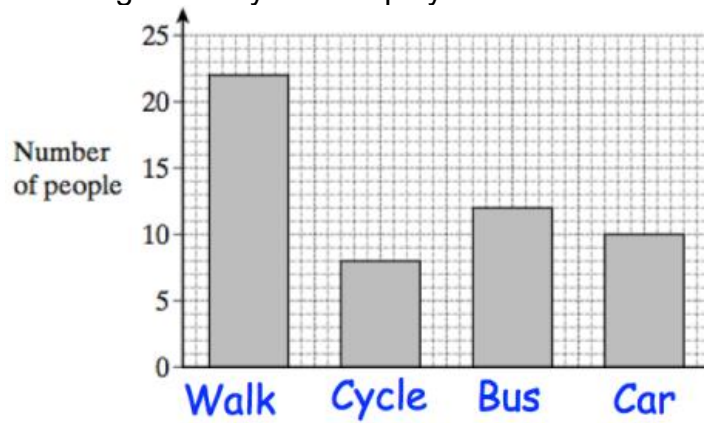
18 28 17 16 38 42 44
36 24 12 53 54 46 32

a) Make an ordered stem and leaf diagram.

b) Find the median height.

c) Find the range of heights.

3. A manager surveys his employees to find out how they travel to work.



- What is the least popular method of transport?
- What is the most popular method of transport?
- Calculate the total number of employees.

4. The shoe sizes of P7 are recorded.

Shoe Size	Frequency
4	12
5	10
6	3
7	1

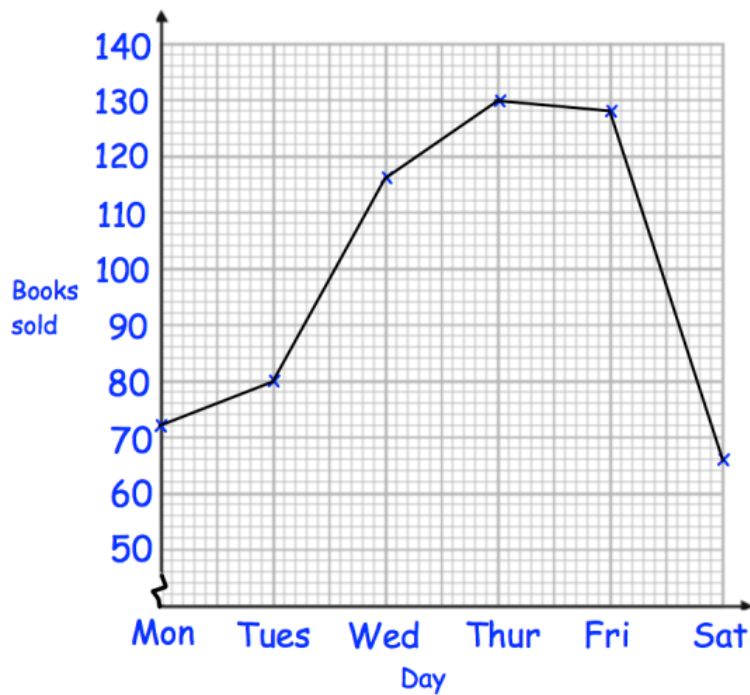
Show these results on a bar chart.

5. The table shows the number of customers each lunch time at an ice crema parlour.

Day	Customers
Monday	12
Tuesday	8
Wednesday	17
Thursday	9
Friday	20
Saturday	26
Sunday	23

Draw a line graph for this data.

6. The line graph shows how many books were sold in a charity shop over one week.

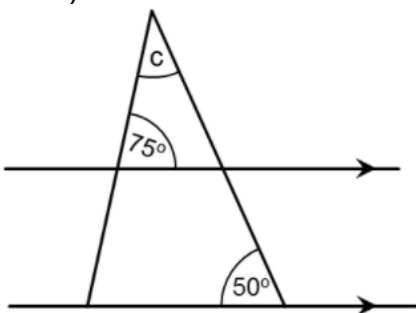


- On which day did the charity shop sell the most books?
- What was the least number of books sold?
- Write one sentence describing how the number of books sold changed over the week.

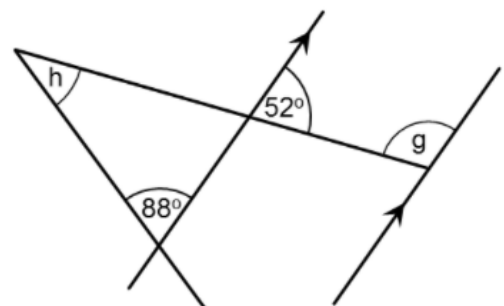
Angles

Find all the missing angles

a)



b)



Fractions

1. Calculate these fractions and write the answers in simplest form:

a) $\frac{2}{5} \times \frac{2}{3}$ b) $\frac{3}{7} \times \frac{4}{9}$ c) $\frac{3}{10} \times \frac{5}{6}$ d) $\frac{11}{16} \times \frac{2}{5}$

e) $\frac{3}{8} \times \frac{4}{5}$ f) $\frac{7}{12} \times 2\frac{4}{7}$ g) $1\frac{1}{2} \times 2\frac{1}{3}$ h) $5\frac{2}{3} \times 1\frac{3}{4}$

2. Work out the following. Leave your answer as a fraction in its simplest form:

(a) $\frac{2}{5} + \frac{1}{2}$ (b) $\frac{2}{7} + \frac{1}{2}$ (c) $\frac{1}{3} + \frac{1}{2}$ (d) $\frac{4}{5} - \frac{2}{3}$
(e) $\frac{8}{9} - \frac{1}{3}$ (f) $\frac{2}{3} + \frac{1}{6}$ (g) $\frac{3}{10} + \frac{2}{5}$ (h) $\frac{3}{8} + \frac{1}{4}$
(i) $\frac{4}{25} + \frac{7}{50}$ (j) $\frac{7}{8} - \frac{3}{8}$

3. Work out the following. Give your answer as a mixed number and improper fraction.

(a) $1\frac{1}{2} + \frac{1}{3}$ (b) $1\frac{3}{5} - \frac{3}{4}$ (c) $2\frac{2}{9} + 1\frac{3}{5}$ (d) $5\frac{8}{9} - 3\frac{4}{7}$

Algebra

1. Solve the following equations

a) $2x + 6 = 8$

b) $5x - 7 = 14$

c) $3x + 9 = 20$

d) $8x - 2 = 0$

2. Solve these equations:

a) $3x + 1 = x + 7$

b) $4x + 5 = 2x + 15$

c) $6x + 1 = 3x + 13$

d) $7x - 6 = 3x + 22$

e) $8x - 13 = 2x + 29$

f) $10x - 2 = 5x + 28$

g) $9x - 1 = 7x + 13$

h) $12x - 12 = 2x + 18$

3. Solve these equations by multiplying out the brackets first:

a) $2(x + 3) = 12$

b) $3(x + 5) = 27$

c) $4(x - 5) = 32$

d) $2(x - 1) = 11$

e) $10(x - 2) = 50$

f) $7(x + 1) = 56$

g) $6(x - 9) = 0$

h) $8(x - 6) = 8$

i) $3(x + 4) = -6$

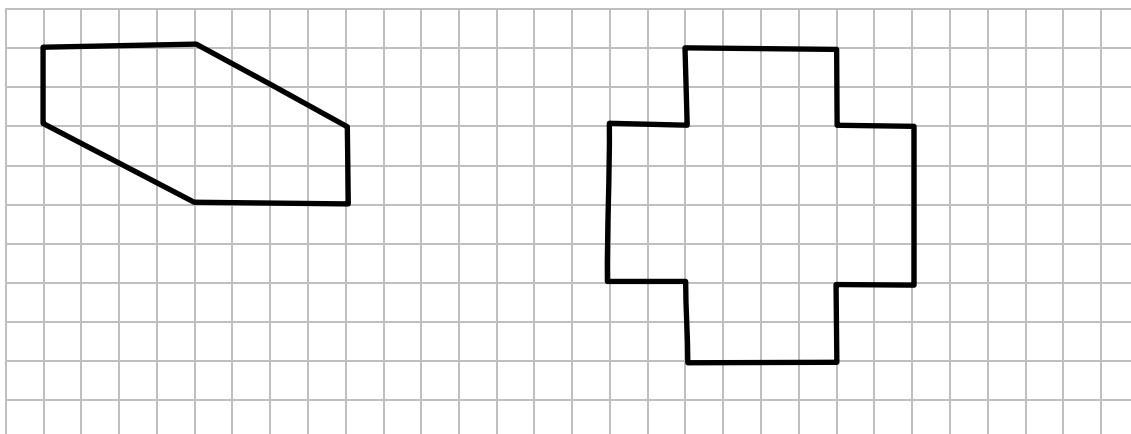
j) $2(2x + 1) = 18$

k) $2(3x + 4) = 20$

l) $3(4x - 8) = 36$

Scale Drawings

1. Draw an enlargement of these shapes using a scale factor of $\frac{5}{2}$.



Answers

Factors, Multiples, Primes and Squares

1. a) 1, 2, 3, 6 b) 1, 2, 4, 8 c) 1, 2, 7, 14
2. 36, 42, 48, 54, 60, 66, 72, 78
3. 11, 13, 17, 19, 23, 29
4. 25, 36, 49, 64, 81, 100
5. 16, 25, 36, 49
6. 17, 19, 23, 29, 31, 37, 41, 43, 47, 53
7. 16, 24, 32, 40, 48, 56, 64
8. a) 52 b) 78 c) 100 d) -2 e) 17 f) 9 g) 10 h) 3
9. a) 2×7 b) $2 \times 3 \times 5$ c) $2 \times 2 \times 2 \times 11$ d) $3 \times 5 \times 7$

Information Handling

1. a) 37 b) 34 c) 47 d) 41

2. a)

1	2	6	7	8
2	4	8		
3	2	6	8	
4	2	4	6	
5	3	4		

Key

$1|2$ means 12 cm
 $n = 14$

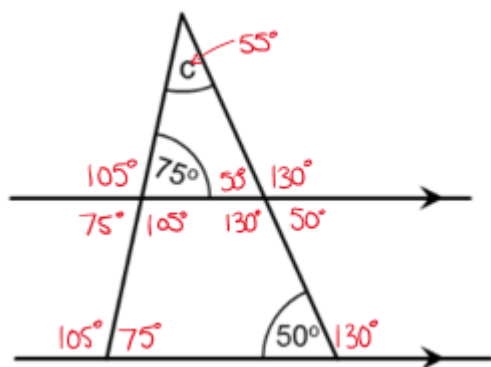
- b) 34 cm c) 42 cm

3. a) Cycle b) Walk c) 52

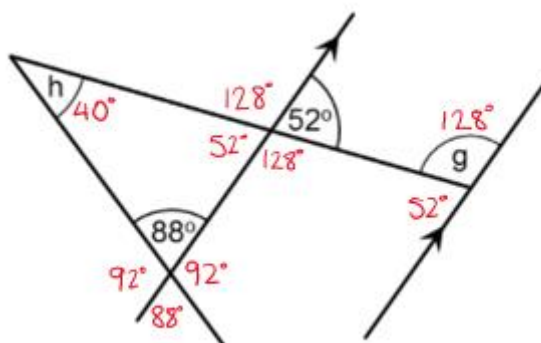
6. a) Thursday b) 66 c) The number of books sold increased from Monday to Thursday then decreased on Friday and Saturday.

Angles

a)



b)



Fractions

1. a) $\frac{4}{15}$ b) $\frac{4}{21}$ c) $\frac{1}{4}$ d) $\frac{11}{40}$ e) $\frac{3}{10}$ f) $\frac{3}{2}$ g) $\frac{7}{2}$ h) $\frac{119}{12}$
2. a) $\frac{9}{10}$ b) $\frac{11}{14}$ c) $\frac{5}{6}$ d) $\frac{2}{15}$ e) $\frac{5}{9}$ f) $\frac{5}{6}$ g) $\frac{7}{10}$ h) $\frac{5}{8}$ i) $\frac{3}{10}$ j) $\frac{1}{2}$
3. a) $\frac{11}{6} = 1\frac{5}{6}$ b) $\frac{17}{20}$ c) $\frac{172}{45} = 3\frac{37}{45}$ d) $\frac{146}{63} = 2\frac{20}{63}$

Algebra

1. a) $x = 1$ b) $x = \frac{21}{5}$ c) $x = \frac{11}{3}$ d) $x = \frac{1}{4}$
2. a) $x = 3$ b) $x = 5$ c) $x = 4$ d) $x = 7$
 e) $x = 7$ f) $x = 6$ g) $x = 7$ h) $x = 5$
3. a) $x = 3$ b) $x = 4$ c) $x = 13$ d) $x = \frac{13}{2}$ e) $x = 7$ f) $x = 7$
 g) $x = 9$ h) $x = 7$ i) $x = -6$ j) $x = 4$ k) $x = 2$ l) $x = 5$