



S2 September Assessment Revision

Fractions

1. Find the following:

a. $\frac{5}{7}$ of £6279

b. $\frac{8}{9}$ of £6786

c. $\frac{4}{5}$ of £4285

d. $\frac{3}{8}$ of £2136

2. Simplify the following fractions:

a. $\frac{4}{12}$

b. $\frac{25}{35}$

c. $\frac{38}{80}$

3. William raises a total of £4208 for a charity expedition. If he spends $\frac{3}{8}$ of the money on buying supplies for a local community centre, how much will he be left with?

Decimals

1. Find the following:

a. $4.98 + 12.47$

b. $19 - 12.56$

c. 4.57×5

d. 8×5.983

2. Round the following numbers to 3 decimal places

a. 28.4628

b. 377.38456

c. 99.9999999

3. Find the following:

a. 3.87×1000

b. 3856.87×10

c. 485.2678×10000

d. 0.078×1000

4. Find the following:

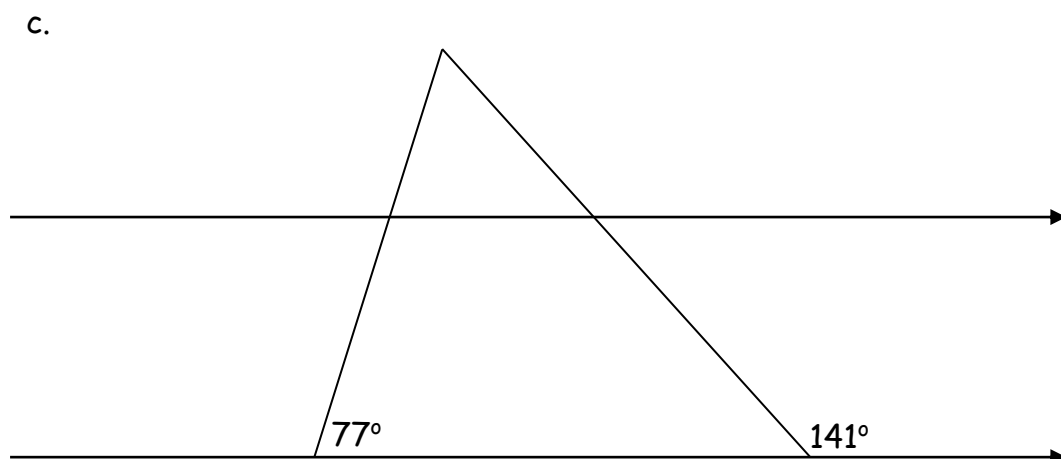
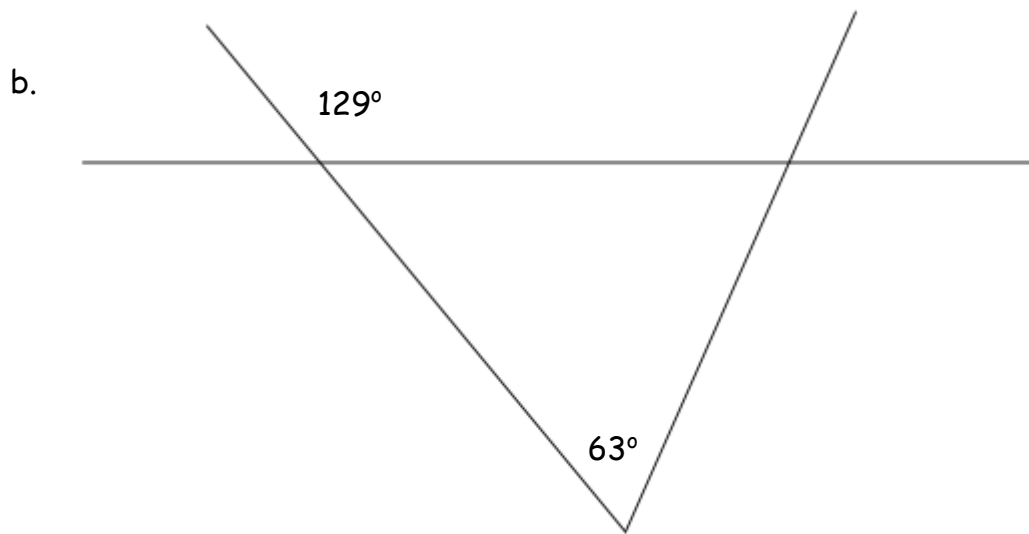
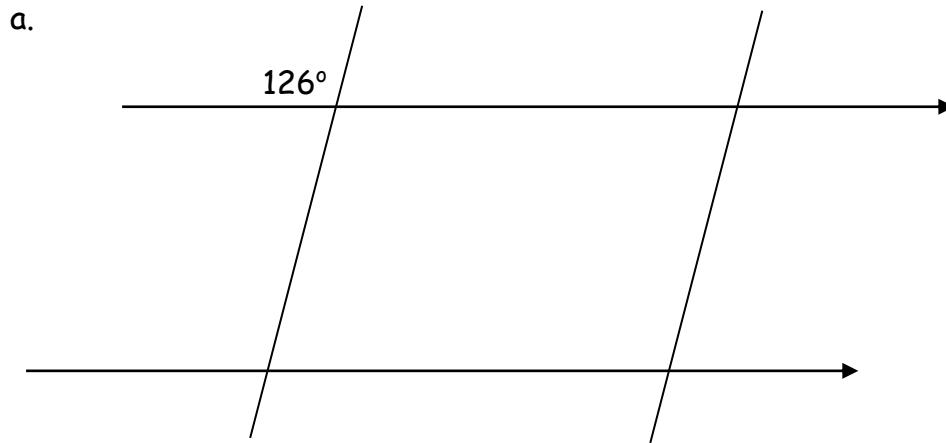
a. $6.2 + 3.01 + 12.654$

b. $189 - 34.01 + 6.23$



Angles

1. Complete all angles in the diagrams below:





Integers

1. Find the following:

a. $-5 + (-11)$

b. $7 - (-13)$

c. $4 \times (-7)$

d. $(-5)^2$

e. $-12 + (-9)$

f. $13 - (-15)$

g. $23 + (-14)$

h. $-3 + (-15)$

i. $-3 + (-9) - (-20)$

j. $3 \times 9 \times (-2)$

k. $14 + (-3) \times 9$

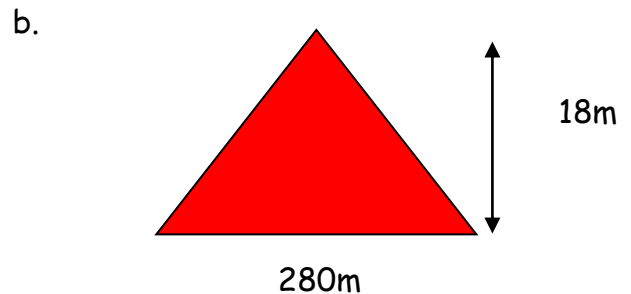
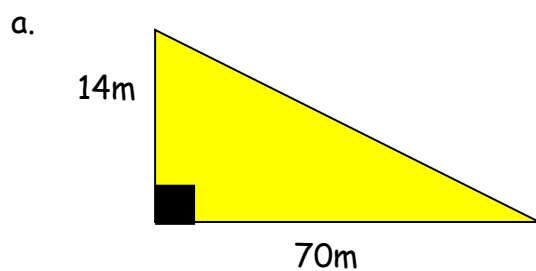
l. $(4 - 11) \times (-12 + 5)$

Perimeter, area and volume

1. A rectangle has a length of 4.2m and breadth of 9m. Calculate the area and perimeter of the rectangle.

2. A square has a side length of 12m. Calculate both the area and perimeter of the square.

3. Calculate the area of the triangles below:



4. A rectangle has a total perimeter of 52m. If the breadth of the shape is 12m, calculate the length.

5. Calculate the volume of a cuboid with dimensions of 7cm by 8cm by 9cm.

6. A rectangle has a total area of 72m^2 . Find possible dimensions of a rectangle to create this area.

7. Convert the following volumes into litres:

a. 3000ml

b. 790,000ml

c. 0.86ml



Algebra

1. If $e = -2$, $f = 4$ and $g = -5$, evaluate the following:

a. $f - 2e + 5g$

b. $(ef)^2 - 4g$

c. $(g - e)^2 - 2f$

d. $eg^2 - efg$

2. If $g = 5$, $h = -2$ and $i = 3$, evaluate the following:

a. $2g - hi$

b. $gh^2 - 2i$

c. $(g - h)^2 - gh$

3. Simplify the following expressions:

a. $6e - 5r + 3 - 2r + 9e - 5$

b. $10 - 7y + 4p - 3y - 9p + 1$

c. $3r^2 - 5r + 7 - 2r^2 - 7r + 1$

d. $19w^3 - 3w^2 + w - 17w^2 + 4w^3 - 5w$

4. Solve the following equations:

a. $e - 5 = 18$

b. $7r = 42$

c. $2e - 1 = 5$

d. $8r - 12 = 40$

e. $34 = 2w + 9$

f. $11 - 5a = 12$

g. $2e + 3 + 5e = 1$

h. $9 - 3i + 1 = 7$

i. $10 - 3p = -7 + 9$

5. Evaluate the following when $x = -4$, $y = 1$ and $z = 5$:

a. xyz

b. $yz - x$

c. $x^2 - 5y$

d. $(y - x)^2 + 10z$

e. $z^3 + xy$

f. $2(z + y)^2 + xz$

Patterns

1. Find a formula for the following patterns:

a.	A	2	3	4
	T	7	10	13

b.	B	5	6	7
	F	36	43	50



2. A pattern has a rule of $B = 7A + 3$

a. Evaluate B when $A = 7$

b. Evaluate B when $A = 18$

3. A pattern has a rule of $M = 5P - 4$

a. Evaluate P when $M = 41$

b. Evaluate P when $M = 71$

Decimals

1. Find the following:

a. 3.98×300

b. 8.36×500

c. 5.47×4000

d. 9.372×7000

e. 8000×4.15

f. 30000×7.67

2. Find the following:

a. $81 \div 9000$

b. $640 \div 8000$

c. $121 \div 11,000$

Percentages

1. Find the following:

a. 25% of £340

b. 75% of £3136

c. 10% of %540

d. 40% of £780

e. 6% of £400

f. 13% of £900

g. 15% of £560

h. 35% of £320

i. 12.5% of £880

2. Write the following percentages as fractions in their simplest form:

a. 14%

b. $33\frac{1}{3}\%$

c. 55%

d. 24%

e. 84%

f. 99%



Measure

1. Convert the following to the measurement in the bracket:

a. 4m (cm)

b. 8km (m)

c. 2.5m (mm)

d. 9.14km (cm)

e. 4000mm (m)

f. 45cm (m)

Ratio

1. Simplify the following ratios:

a. 7 : 14

b. 27 : 81

c. 45 : 85

2. Lottery winnings of £169 000 are shared in the ratio of 7 : 4 : 2 between a group of people. Calculate how much each person would receive.

3. A survey is taken consisting of 14 boys and 21 girls.

a. Write this as a ratio in its simplest form.

b. As time passed there were 200 boys surveyed, how many girls were surveyed?

c. In a new year group of 575 pupils, the ratio was found to be the same. How many girls would there be?

4. In a lottery syndicate, Paul gets the least amount. Kat gets double the amount Paul gets whilst Chris gets treble the amount Paul gets.

If they won £360,000 in total, how much would each person receive?

Factors and multiples

1. Write out the first 5 multiples of the following numbers:

a. 5

b. 9

c. 11

2. Write the factors of the numbers below:

a. 24

b. 81

c. 100



3. Write the following numbers as product of prime factors:

a. 28

b. 36

c. 54

Algebra

1. Simplify the following expressions:

a. $2e \times 3e$

b. $6r \times 3r$

c. $5w^2 \times 3w$

d. $(5y)^2$

e. $(2h)^3$

f. $10p^2 - 3p \times 2p$

2. Multiply out the following brackets and simplify:

a. $3(h - 5) + 7(h + 4)$

b. $6(y - 3) - 7(y - 2)$

c. $3 - 2(f + 5) + 5(f - 4)$

d. $4m - 5(m - 6) + 36$

3. Multiply out the following brackets and simplify:

a. $3(g - 3) + 2g + 7$

b. $9 - 4(h - 6) + 2h$

c. $5(d - 2) - 2(d + 1)$

d. $6 - 2(w - 4) - 7(w - 5)$

4. Factorise the following:

a. $6e - 8e^3$

b. $12rs - 20s^3$

c. $15f^2g + 35f^3$

5. Factorise the following expressions:

a. $30r^3s^2 - 45r^2$

b. $28ij^2k^5 - 14i^2j^3k$

6. Factorise the following expressions:

a. $8r^2s^3 - 12rs^3 + 16r^3s$

b. $50e^3f^2 + 75e^2f^2 - 25e^4f^5$



Fractions

1. Find the following:

a. $\frac{3}{4} + \frac{2}{5}$

b. $1\frac{2}{3} \times \frac{7}{10}$

c. $2\frac{2}{3} - \frac{4}{9}$

2. Find the following:

a. $\frac{3}{7} + \frac{1}{3}$

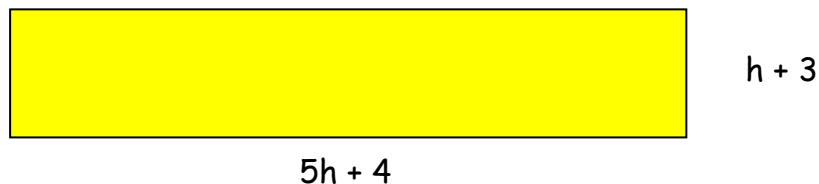
b. $1\frac{2}{5} - \frac{4}{9}$

c. $\frac{4}{5} \times \frac{6}{7}$

Problem Solving

1. Lottery winnings of £169 000 are shared in the ratio of 7 : 4 : 2 between a group of people. Calculate how much each person would receive.

2. A rectangle can be seen below.



a. Find a simplified expression for the perimeter of the rectangle.

The perimeter of the rectangle is found to be 80m.

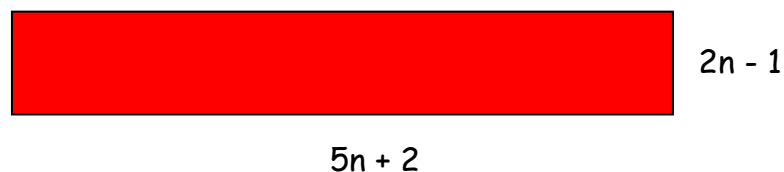
b. Hence, solve for the value of h.

3. Paul is double the age of Calum.

When their ages are combined, the value is 51 years.

What is Paul's age?

4. A rectangle can be seen below.



a. Find a simplified expression for the perimeter of the rectangle.



The perimeter of the rectangle is 72m

b. Hence, solve for the value of n .