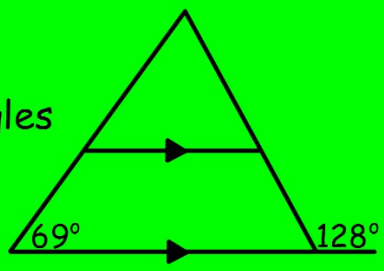
Starter

1. Find
   a. $^{2}/_{5} + {}^{3}/_{8}$ b. $2^{3}/_{4} \times 3^{1}/_{8}$

2. Copy the diagram and fill in the missing angles



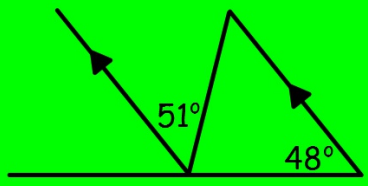
3. Fully factorise
   a. $5k^2 - 10k$ b. $36ab^2 - 6a^2b$ c. $121xy^3 + 22x^2y^2$

4. Sarah is creating a blend of tea by mixing Assam and Darjeeling teas in the ratio 4:3.
   She has 300 g of Assam tea and 240 g of Darjeeling tea.
   What is the largest weight of blend she can produce?

Starter

1. Find
   a. $^{16}/_{3} - {}^{2}/_{9}$ b. $3^{4}/_{7} \div 1^{1}/_{4}$

2. Copy the diagram and fill in the missing angles



3. Solve
   a. $5x - 2(x + 3) = 10$ b. $3(x + 5) - 2(2x + 4) = 0$

4. A school theatre trip is made up of teachers and pupils in the ratio 2:15. There are 6 teachers on the trip.
   How many people are on the trip altogether?

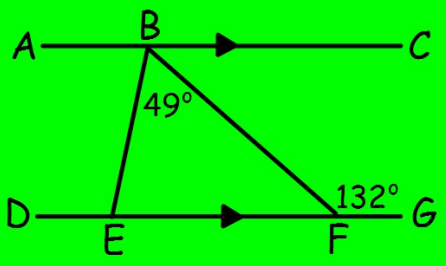
Starter

1. Find
   a. $1\frac{2}{3} + \frac{3}{11}$ b. $7\frac{1}{8} - 2\frac{5}{6}$

2. Fully factorise
   a. $6xyz - 12x$ b. $24a^2b + 48ab^2$ c. $42x^2yz^3 - 18x^2y^2z^4$

3. Iron carbide is made by mixing iron and carbon in the ratio of 2:5.
   How much of each element is present in 840g of iron carbide?

4. Find the sizes of
   (i) angle CBF
   (ii) angle ABE



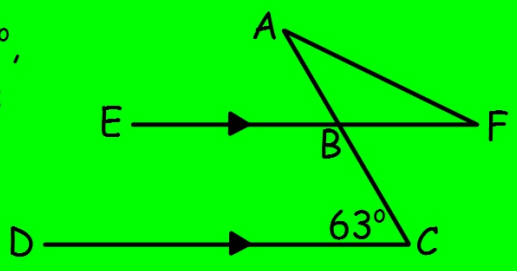
Starter

1. Solve
   a. $4(x + 1) = 2(x - 4)$ b. $10 - 2(3x - 5) = 3(3x + 9)$

2. Find
   a. $2\frac{3}{5} \times 3\frac{1}{2}$ b. $7 \div 2\frac{3}{4}$

3. An orchard has a mixture of apple and pear trees in the ratio 9:2.
   There are 108 apple trees in the orchard.
   How many trees are there in total?

4. Given that angle AFB is 34°,
   find the size of angle FAB:



Starter

1. Find
   a. 4.35 x 7000 b. 22.5% of £664

2. The ratio of the area of this rectangle to the square is 4:3.
   a. Calculate the area of the rectangle
   b. Hence, find length of side x

3. Solve 7 - 2(x + 1) - 3(x - 2) = 2

4. Given that angle VXW is 32°,
   find the size of angle STW