Starter

1. Calculate the gradient of the line
   a. Joining (3, -2) to (7, -8)
   b. Parallel to the line $4y - 3x - 8 = 0$

2. a. Find the distance covered by a coach travelling at an average speed of 44 m.p.h. for 2 hours 15 minutes.
   b. If a train travels 30 km in 40 mins, find its average speed.

3. Find the area of a semi-circle with a diameter of 45 cm.

4. Solve the following

   a. $\frac{1}{2}x - 1 = 4$

   b. $3(2x - 1) - 4(x - 5) = 10$

Starter

1. Mr Taylor bought a dishwasher for £400.
   It depreciated in value by 20% every year.
   What was it worth after 3 years?

2. a. How long would it take a bus to cover 225 miles at 50 m.p.h?
   b. If a marathon runner ran 18 miles in one and a half hours, find his average speed.

3. Solve the following

   a. $\frac{2x - 5}{4} + \frac{3x}{5} = 9$

   b. $4x + 5 < 17$

4. An orienteering competition was held on a triangular course. From the start, participants walked 3.2 km East to the first checkpoint, 1.9 km North to the second, and then raced back to the finishing line. Calculate the overall distance of the event.

Starter

1. a. Find the distance covered by a camel moving at 3.5 m.p.h. for 1 hour and 45 minutes.
   b. How long would it take to sail 25 miles at 20 m.p.h?

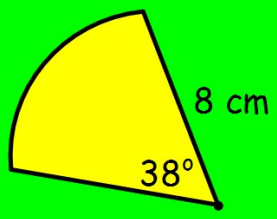
2. A straight line L_1, passing through the point (0, -5), is parallel to the line $7y + 4x - 3 = 0$. Find the equation of this line.

3. Solve the following

   a. $\frac{1}{2}x + \frac{1}{5} = 4$

   b. $5x + 8 < 3x + 18$

4. Find the arc length **and** area of the following sector



Starter

1. A travel shampoo and its full size equivalent are mathematically similar. If the small bottle holds 45 ml, how much does the large bottle hold?

2. a. How long would it take to fly 375 miles at an average speed of 250 m.p.h.?
   b. Calculate the average speed of a snail travelling 204 cm in 3 hours.

3. Solve the following
   a. $x(x + 5) = x^2 - 45$ b. $24 - 3x \geq x + 12$

4. A straight line passes through the points (0, 1) and (-5, 6).
   a. Find the equation of this line.
   b. Hence, find the coordinates of the point of intersection between this line and the line $x = 3$.

Starter

1. Calculate the compound interest earned on £3,350 over a 4 year period at an interest rate of 0.03%.
   Give your answer correct to 1 significant figure.

2. A cyclist travelled 37.4 km at an average speed of 22 km/h.
   Calculate how long he took in hours and minutes.

3. Solve the following

   a. $5(2y - 1) + 7 \leq 3$

   b. $\frac{3}{4}x - 1 = \frac{1}{5}$

4. Bobby buys a full tin of paint holding x litres.
   He uses half the tin to paint the hall, and then another 2 litres to paint the bathroom.
   If there are 3 litres left in the tin, how much did it hold when full?