



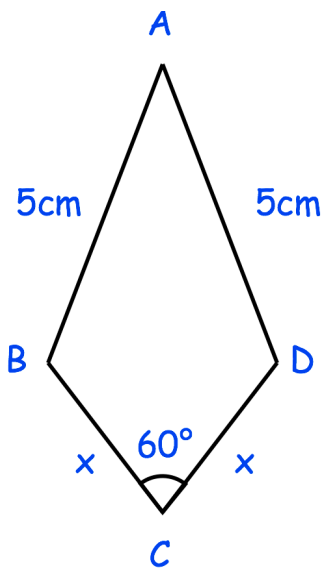
There are 9 counters in a bag.

5 of the counters are red  
4 of the counters are white.

Tom takes, at random, three counters from the bag.

Work out the probability that the counters are not all the same colour.

Shown is kite ABCD



Prove

$$\cos BAD = 1 - \frac{x^2}{50}$$

Show, by using simultaneous equations, that the line  $y = 5x - 3$  is a tangent to the curve  $y = x^2 + x + 1$

Solve

$$\frac{x}{2x-1} - \frac{x}{2} = 3$$

Give your solutions to 1 decimal place.