

28th October



Corbettmaths

James is a student of a class of 32 students, 6 of which wear glasses.

1402 students attend the school.

Use this information to estimate how many students in the school wear glasses.

$$\frac{6}{32} \approx \frac{1}{5}$$

$$\frac{1}{5} \text{ of } 1400 = \underline{280}$$

£5200 is invested at 2.8% compound interest per annum.

How many years will it take for the investment to exceed £7000.

11 years

$$5200 \times 1.028^x$$

$$10 \text{ years} - \pounds 6853.85$$

$$11 \text{ years} - \pounds 7045.76$$

Simplify

$$\frac{2x^2 + 5x - 3}{x^2 - 9} \quad \frac{(2x-1)(x+3)}{(x-3)(x+3)}$$

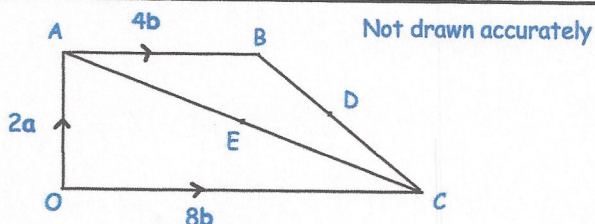
$$\frac{2x-1}{x-3}$$

A bag contains 10 counters.  
 5 of the counters are red  $\frac{5}{10} \times \frac{5}{10} = \frac{25}{100}$   
 3 of the counters are purple  $\frac{3}{10} \times \frac{3}{10} = \frac{9}{100}$   
 2 of the counters are white  $\frac{2}{10} \times \frac{2}{10} = \frac{4}{100}$   
 Sharon chooses a counter at random, records the colour, then replaces it.  
 Sharon then chooses a second counter at random and records the colour.

What is the probability that both counters are the same colour?

$$\frac{2}{10} \times \frac{2}{10} = \frac{4}{100}$$

$$\frac{38}{100} = \frac{19}{50}$$



Point D is the midpoint of BC.  
 Point E is the midpoint of AC.

Write down a vector for  $\vec{AE}$

$$\vec{AC} = -2a + 8b$$

$$\vec{AE} = -a + 4b$$