



Expand $(8 - \sqrt{3})^2$ giving your answer in form $a + b\sqrt{3}$

$$(8 - \sqrt{3})(8 - \sqrt{3})$$

$$64 - 16\sqrt{3} + 3$$

$$67 - 16\sqrt{3}$$

C, D and E are such that

$$C:D = 1:4$$

$$D = \frac{7}{8}E$$

D is $\frac{7}{8}$ of E

$$8D = 7E$$

$$D:E = 7:8$$

Work out the ratio of C:E

$$C : D : E$$

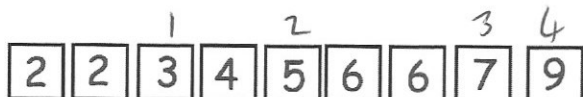
$$1 \quad 4$$

$$7 \quad 8$$

$$7 \quad 28 \quad 32$$

$$7:32$$

Rebecca has 9 cards, each with a number on it.



She picks three cards at random, without replacement.

Rebecca multiplies the three numbers to get a score.

Calculate the probability that the score is an even number

$$1 - P(ooo)$$

$$1 - \left(\frac{4}{9} \times \frac{3}{8} \times \frac{2}{7}\right)$$

$$\frac{20}{21}$$

Solve to one decimal place

$$\frac{1}{2x+1} + \frac{4}{x-2} = 1$$

$$\frac{x-2 + 4(2x+1)}{(2x+1)(x-2)} = 1$$

$$\frac{x-2 + 8x+4}{2x^2-3x-2} = 1$$

$$9x+2 = 2x^2-3x-2$$

$$0 = 2x^2 - 12x - 4$$

$$0 = x^2 - 6x - 2$$

$$a=1$$

$$b=-6$$

$$c=-2$$

$$x = -0.3 \text{ or } x = 6.3$$

$$x = \frac{6 \pm \sqrt{44}}{2}$$