



The events A and B are mutually exclusive.

$$P(A) = 0.5$$

$$P(B) = 0.4$$

Find  $P(A \cup B)$



$$0.5 + 0.4 = 0.9$$

Write in the form  $a\sqrt{b}$ , where a and b are integers to be found.

$$\frac{24}{\sqrt{6}} \times \sqrt{6} = \frac{24\sqrt{6}}{6}$$

$$4\sqrt{6}$$

Prove algebraically that the sum of the squares of any two odd numbers is always even.

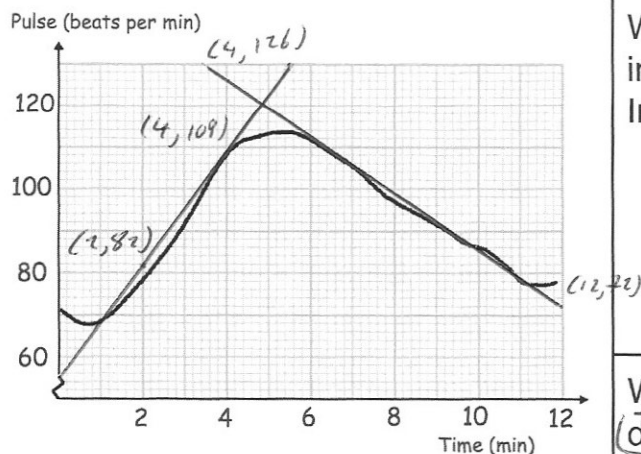
$$(2k+1)^2 = 4k^2 + 4k + 1$$

$$(2m+1)^2 = 4m^2 + 4m + 1$$

$$4k^2 + 4k + 4m^2 + 4m + 2$$

$$2(2k^2 + 2k + 2m^2 + 2m + 1)$$

is even



Work out the rate at which the pulse is increasing at four minutes. Include units.

$$\frac{\text{rise}}{\text{run}} = \frac{27}{2} = 13.5 \text{ beats per min}^2$$

Work out the rate at which the pulse is decreasing at seven minutes. Include units.

$$\frac{\text{rise}}{\text{run}} = \frac{-54}{8} = -6.75$$

$$6.75 \text{ beats per min}^2$$