



Write an expression for the perimeter of the rectangle

$$\frac{2(w-1)}{3} + w + 3$$

$$\frac{2w-2}{3} + w + 3 = \frac{2}{3}w - \frac{2}{3} + w + 3 = \frac{5}{3}w + 2\frac{1}{3}$$

$$\frac{w+3}{2} \times 2 = w+3$$

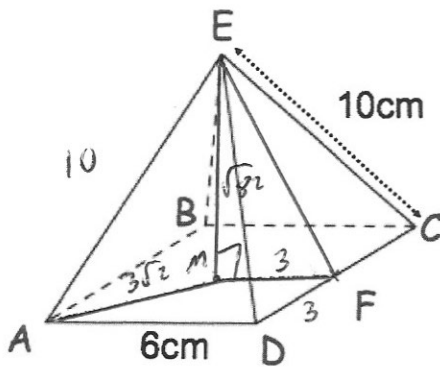
C, D and E are such that

$$C:D = 1:7$$

D is  $\frac{2}{5}$  of E      D:E  
2:5

Work out the ratio of C:E

$$\begin{array}{ccc} C & D & E \\ 1 & 7 & \\ \times 2 & \left( \begin{array}{l} 1:7 \\ 2:5 \end{array} \right) \times 7 & \\ & 2:14 & = 35 \\ & & 2:35 \end{array}$$



Find the length of EF

$$\begin{aligned} AC^2 &= 6^2 + 6^2 = 72 & A &= \sqrt{72} = 6\sqrt{2} \\ AM &= 3\sqrt{2} \\ EM &= 10^2 - (3\sqrt{2})^2 = 82 \\ EM &= \sqrt{82} \\ EF^2 &= 3^2 + (\sqrt{82})^2 = 91 \end{aligned}$$

$EF = \sqrt{91}$  cm

Shown is a square based pyramid, ABCDE.

F is the midpoint of CD

Calculate angle BDE

$$\cos x = \frac{3\sqrt{2}}{10}$$

$$x = 64.896^\circ$$

The set of values for x that satisfies a quadratic inequality is

$$-5 < x < -2$$

Write down a possible quadratic inequality.

$$\begin{aligned} (x+2)(x+5) &< 0 \\ x^2 + 7x + 10 &< 0 \end{aligned}$$