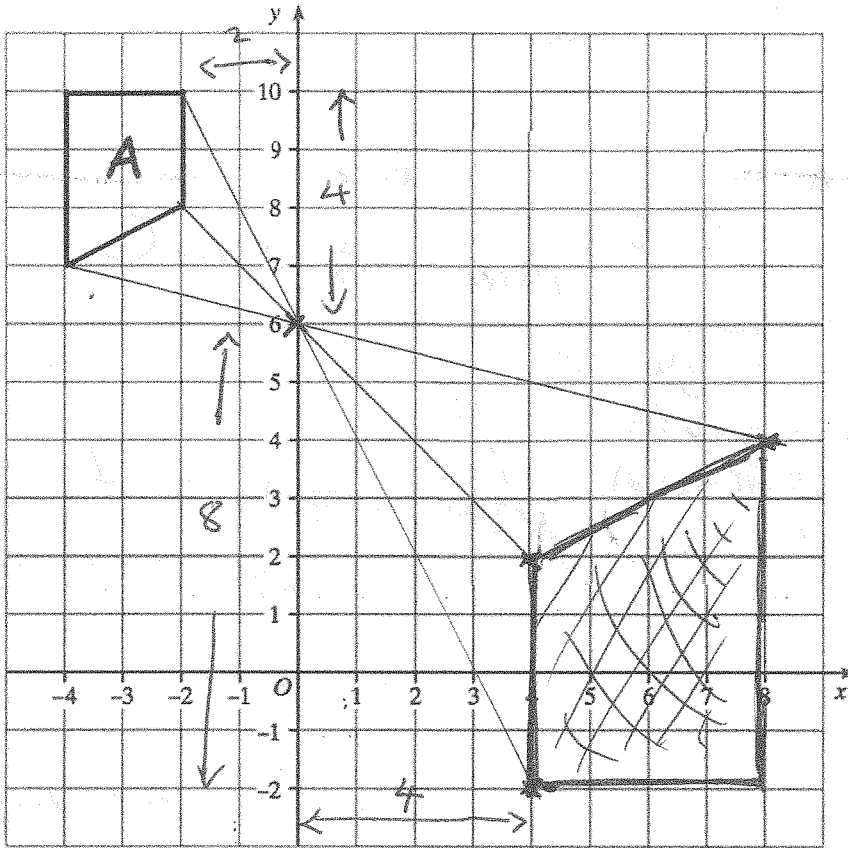


m8 = 18 days to go!

6.



Always measure from the C.O.E. centre of enlargement

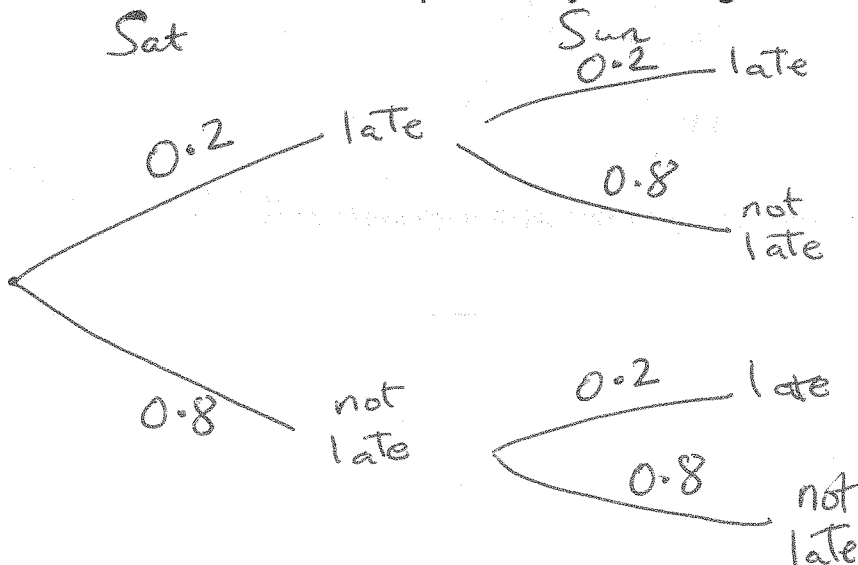
Enlarge the triangle by scale factor -2 , using centre of enlargement $(0, 6)$

into the **NEGATIVE** universe ⁽³⁾

The probability that a train arrives late is 0.2

James is travelling by train on Saturday and Sunday.

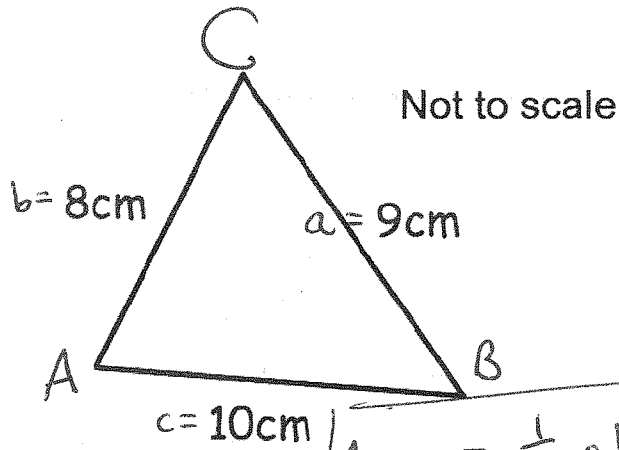
(a) Show this information on a probability tree diagram.



late AND late
 $0.2 \times 0.2 = 0.04$

Formula

Page

Sine &
Cosine Rule

$$\text{Area} = \frac{1}{2} ab \sin C$$

Find the area of the triangle.

We must find an angle.

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$9^2 = 8^2 + 10^2 - 2 \times 8 \times 10 \cos A$$

$$160 \cos A = 8^2 + 10^2 - 9^2$$

$$160 \cos A = 83$$

$$\cos A = \frac{83}{160}$$

$$A = \cos^{-1}\left(\frac{83}{160}\right)$$

$$A = 58.8^\circ$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} bc \sin A \\ &= \frac{1}{2} \times 8 \times 10 \times \sin 58.8 \\ &= 34.2 \end{aligned}$$

$$\underline{\underline{34.2}} \text{ cm}^2 \quad (5)$$

4. Solve the equations



$$x^2 + y^2 = 17$$

$$x + 4y = 0$$

$$x + 4y = 0$$

$$x = -4y$$

Now put into
the other

$$x^2 + y^2 = 17$$

$$(-4y)^2 + y^2 = 17$$

$$16y^2 + y^2 = 17$$

$$17y^2 = 17$$

$$y^2 = 1$$

$$y = \pm 1$$

when $y = 1$

$$x = 4 \times 1$$

$$x = 4$$

when $y = -1$

$$x = 4 \times (-1)$$

$$x = -4$$

Remember to check.

Answer $x = 4$ and $y = 1$ and $x = -4$ and $y = -1$