

No, because you can work out all of the missing angles, see my workings below:

Rachel says that it's not possible to calculate all of the missing angles.

Do you agree? Explain why.

There are lots of options for where you could start on this Q.

Just look at this part.

I know angles on a straight line add to 180° .

$$180^\circ = 157^\circ + a \quad \text{so angle } a = 23^\circ$$

Angles a and c are equal because they are vertically opposite.

So angle c also = 23° .

To work out b , I have 2 choices:

1. Use my knowledge that angles on a straight line add to 180° .

$$180^\circ = 90^\circ + 23^\circ + b \quad \text{so } b = 67^\circ$$

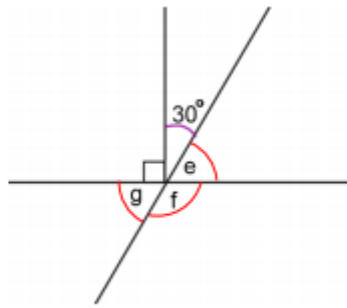
(c)

2. Use my knowledge that angles around a point add to 360° .

$$360^\circ = 90^\circ + 23^\circ + 23^\circ + 157^\circ + b$$

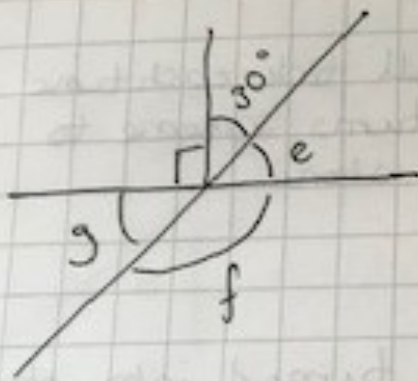
(a) (c)

so $b = 67^\circ$



Darren says that angle g is equal to 30° because vertically opposite angles are equal.

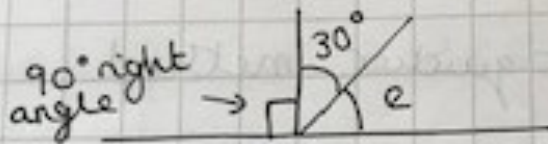
Do you agree? Explain your answer.
If you disagree, work out the value of g .



g is not vertically opposite to the 30° angle. It is vertically opposite e .

$$g = e.$$

To work out e :



I know angles on a straight line add to 180° .

$$180^\circ = 90^\circ + 30^\circ + e$$

$$e = 60^\circ \text{ not } 30^\circ \text{ as Darren suggested.}$$

And g is the same as e , so g is also 60° .