

February 15th

The points $(-h, h)$, $(h, 5h)$ and $(5, 1)$ are co-linear
(lie on a straight line).

Therefore the gradient between each pair of points must be equal

Gradient between the 1st two points:

$$\frac{5h - h}{h - -h} = \frac{4h}{2h} = 2$$

Gradient between 2nd two points:

$$\frac{5h - 1}{h - 5}$$

So form and solve the equation

$$\frac{5h - 1}{h - 5} = 2$$

Hence $5h - 1 = 2h - 10$

Therefore $3h = -9$

So **$h = -3$**