

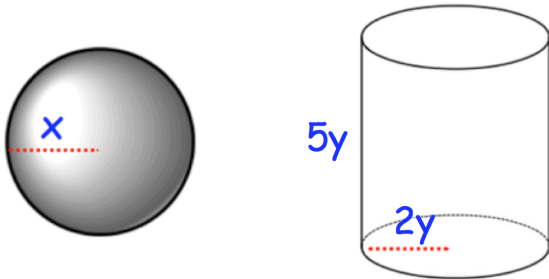
**27th September**

Corbettmaths

The line passing through  $(-8, -9)$  and  $(-2, h)$  has a gradient of  $-1.4$

Find  $h$ .

A sphere has radius  $x$  cm.  
A cylinder has radius  $2y$  cm and height  $5y$  cm.



The surface area of both shapes are equal.

Show  $x : y = \sqrt{7} : 1$

Solve the simultaneous equations

$$2x + 5y + z = -6$$

$$3x - 3y + 8z = 149$$

$$4x + 2y - 5z = -47$$