

September 18th

The line $y = \frac{1}{4}x + 3$ is reflected in the mirror line $y = x$

Find the equation of the image.

This is the equivalent of finding the inverse function of $f(x) = \frac{1}{4}x + 3$

To do this, rearrange the equation to make x the subject:

$$x = 4(y - 3)$$

So the inverse function

$$f^{-1}(x) = 4x - 12$$

So the equation of the line is

$$\mathbf{y = 4x - 12}$$