



The line passing through (1, p) and (5, 1) has a gradient of 0.75

Find p.



$$p = -2$$

$$\frac{1-p}{4} = 0.75$$

$$1-p = 3$$

$$p = -2$$

Rationalise and simplify

$$\frac{15}{7\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} = \frac{15\sqrt{5}}{35}$$

$$\frac{3\sqrt{5}}{7}$$

$$f(x) = 3x + a$$

$$g(x) = ax + 2$$

$$fg(x) = -6x + b$$

a and b are constants

Work out the values of a and b

$$fg(x) = 3(ax+2) + a$$

$$= 3ax + 6 + a$$

$$3ax + 6 + a = -6x + b$$

$$a = -2$$

$$b = 4$$

A quadratic sequence is

200 254 304 350 ...

54 50 46

-4 -4

Work out the nth term

$$a = -2$$

$$b = 60$$

$$c = 142$$

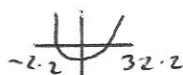
$$-2n^2 + 60n + 142$$

Which term of the sequence is the first negative number?

$$-2n^2 + 60n + 142 < 0$$

$$-n^2 + 30n + 71 < 0$$

$$n^2 - 30n - 71 > 0$$



$$a = 1 \quad b = -30$$

$$c = -71$$

33rd term (-56)