



Prove that the product of two odd numbers is always odd.

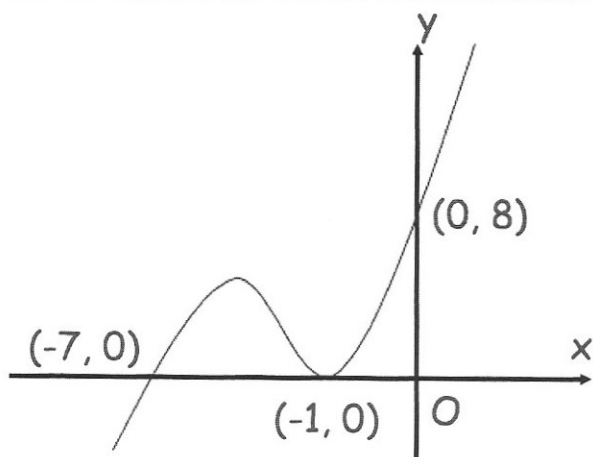
$$(2m+1)(2n+1)$$

$$4mn + 2m + 2n + 1$$

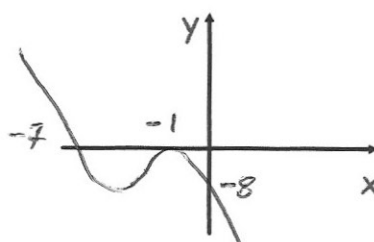
$$2(2mn + m + n) + 1$$

$$\text{even} + 1 = \text{odd}$$

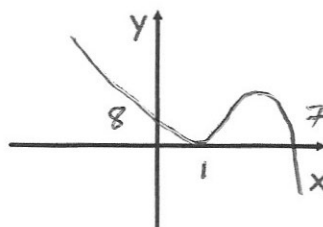
$$=$$



Sketch $y = -f(x)$



Sketch $y = f(-x)$



Find the 20th term in the quadratic sequence

5 6 9 14 21
1 3 5 7
2 2 2

$$\frac{2a=2}{a=1}$$

$$3a+b=1$$

$$3+b=1$$

$$b=-2$$

$$a+b+c=5$$

$$1-2+c=5$$

$$c=6$$

$$n^2 - 2n + 6$$

$$20^2 - (2 \times 20) + 6 = 366$$

Find x

Give your answers to 2 decimal places

$$\frac{7x-7}{(x+3)(x-1)} + \frac{x+3}{x-1} = 1$$

$$8x-4 = x^2+2x-3$$

$$\frac{7}{x+3} + \frac{1}{x-1} = 1$$

$$x^2 - 6x + 1 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a=1$$

$$b=-6$$

$$c=1$$

$$x = 5.83 \text{ or } x = 0.17$$