Name: _____ 5-a-day Higher Plus

13th May

Corbettmaths

James has solved the equation
$x^2 + ax + b = 0$

His solutions are $x = -3 + \sqrt{17}$ and $x = -3 - \sqrt{17}$

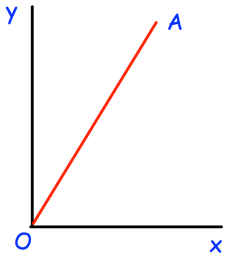
Find a and b

Solve

$$\frac{81^x}{9^{x+1}} = 3\sqrt{3}$$

Jim picks a five digit odd number.
The second digit is less than 5.
The fourth digit is a cube number
The first digit is a prime number.

How many different numbers could he pick?



The line OA has a gradient of 3
The length of OA is $12\sqrt{10}$

Work out the coordinates of A

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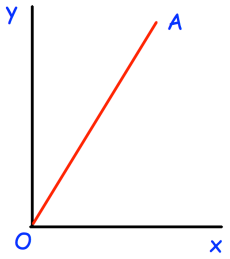

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