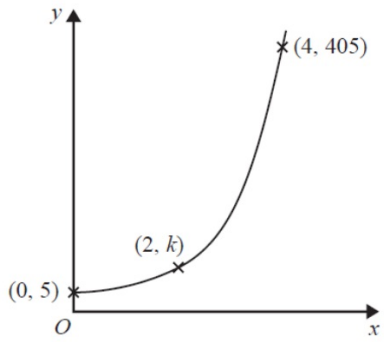
# A75 (H) Exponential Graphs
# - Finding Missing Values

OCR

Edexcel

**20** Here is a sketch of part of the graph of $y = pq^x$ where $q > 0$






The points (0, 5), (2, $k$) and (4, 405) are all on the graph of $y = pq^x$

Find the value of $k$.

.....

**(Total for Question 20 is 4 marks)**

**20** Here is a sketch of part of the graph of $y = pq^x$ where $q > 0$

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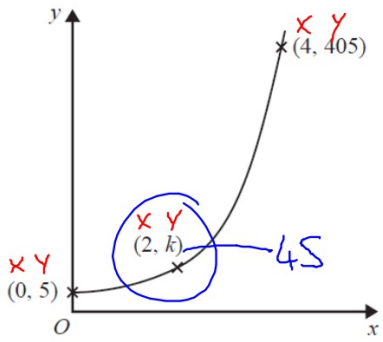
$y = pq^x$

$y = 5(3^x)$

$y = 5(3^2)$

$y = 5(9)$




The points (0, 5), (2, $k$) and (4, 405) are all on the graph of $y = pq^x$

Find the value of $k$.

$y = 45$

$y = pq^x$

$5 = pq^0$

$q^0 = 1$

$5 = p(1)$

$5 = p$ ✓

$y = 5q^x$

$405 = 5q^4$

$\frac{405}{5} = q^4$

$81 = q^4$

$q^4 = 81$

$q = \sqrt[4]{81}$

$q = 3$ ✓

45 ✓

**(Total for Question 20 is 4 marks)**

Video created by W Neill

**20** The equation of a curve is $y = a^x$
$A$ is the point where the curve intersects the $y$-axis.

(a) State the coordinates of $A$.

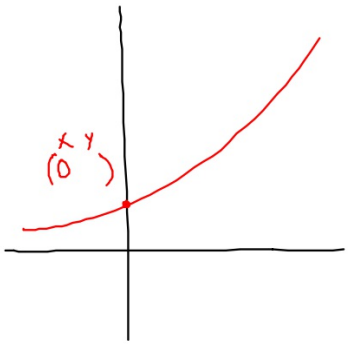
(.....  , .....)

**(1)**

Video created by W Neill

**20** The equation of a curve is $y = a^x$
$A$ is the point where the curve intersects the $y$-axis.

(a) State the coordinates of $A$.




$y = a^0$ .... 1

$y = 1$

( 0 , 1 )

**(1)**

AQA