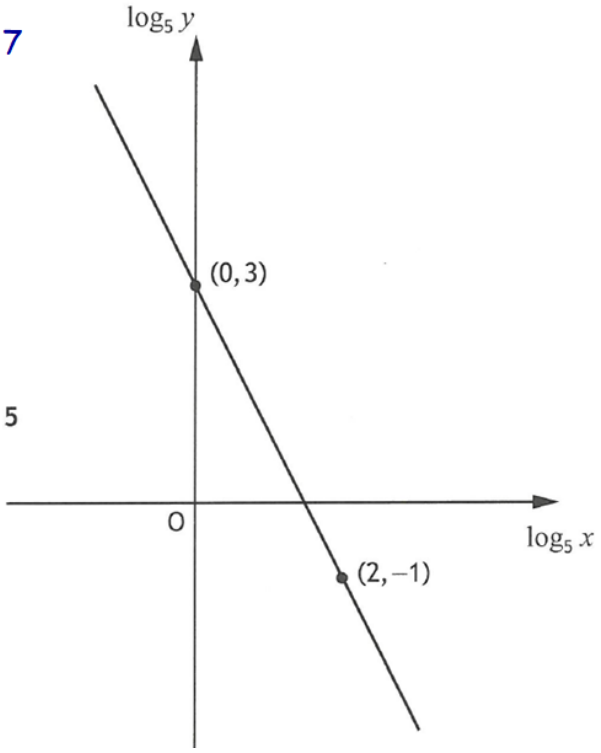
SQA Past paper questions

2022 – Paper 2 – Question 7

Two variables, x and y, are connected by the equation $y = kx^n$.

The graph of $\log_5 y$ against $\log_5 x$ is a straight line as shown.

Find the values of k and n. **5**

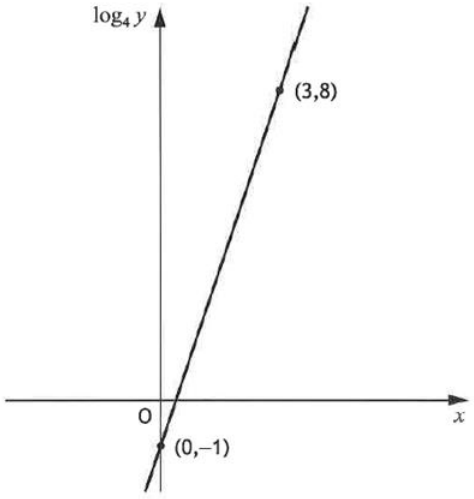


Click here for video solution.

2019 – Paper 2 – Question 12

Two variables, x and y, are connected by the equation $y = ab^x$.

The graph of $\log_4 y$ against x is a straight line as shown.



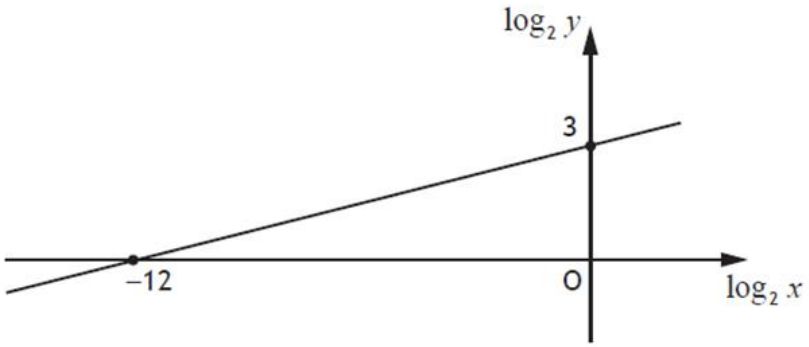
Find the values of a and b. **5**

Click here for video solution.

2017 – Paper 2 – Question 9

Two variables, x and y, are connected by the equation $y = kx^n$.

The graph of $\log_2 y$ against $\log_2 x$ is a straight line as shown.



Find the values of k and n. **5**

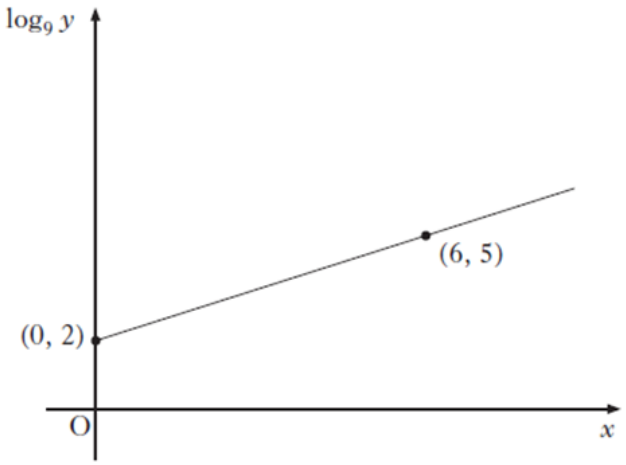
Click here for video solution.

2014 – Paper 1 – Question 24

Two variables, x and y, are related by the equation

$$y = ka^x.$$

When $\log_9 y$ is plotted against x, a straight line passing through the points (0, 2) and (6, 5) is obtained, as shown in the diagram.



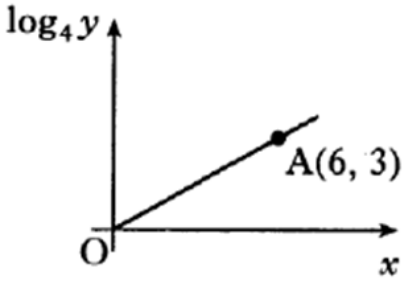
Find the values of k and a. **5**

Click here for video solution.

2006 – Paper 1 – Question 14

Two variables, x and y, are connected by the law $y = a^x$. The graph of $\log_4 y$ against x is a straight line passing through the origin and the point A(6, 3). Find the value of a.

4



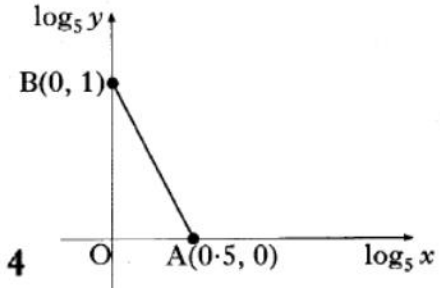
Click here for video solution.

2002 – Paper 1 – Question 11

The graph illustrates the law $y = kx^n$.

If the straight line passes through A(0·5, 0) and B(0, 1), find the values of k and n.

4



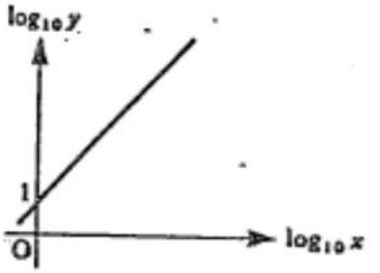
Click here for video solution.

1990 – Paper 1 – Question 14

As shown in the diagram opposite, a set of experimental results gives a straight line graph when $\log_{10} y$ is plotted against $\log_{10} x$. The straight line passes through (0, 1) and has a gradient of 2.

Express y in terms of x.

(6)



Click here for video solution.