

A79 (H) Recognising Graph Shapes

OCR

17 For each graph below, select its possible equation from this list.

Created by W Neill

$$y = \frac{1}{x}$$

$$y = \cos x$$

$$y = x^2$$

$$y = \left(\frac{1}{2}\right)^x$$

$$y = 2^x$$

$$y = \sin x$$

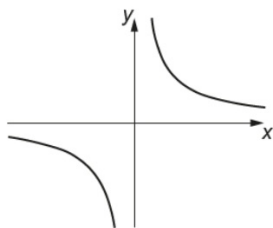
$$y = 2^{-x}$$

$$y = \tan x$$

$$y = x^3$$

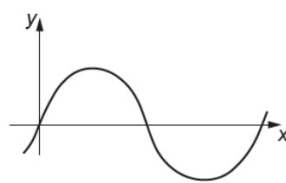
$$y = \frac{1}{x^2}$$

(a)



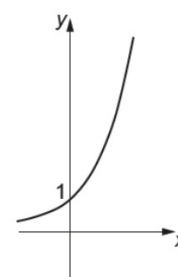
(a) $y = \dots\dots\dots$

(b)



(b) $y = \dots\dots\dots$

(c)



(c) $y = \dots\dots\dots$

17 For each graph below, select its possible equation from this list.

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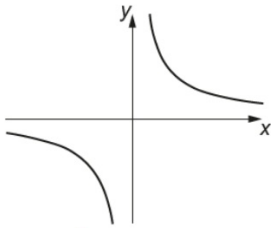
$$y = 2^{-x}$$

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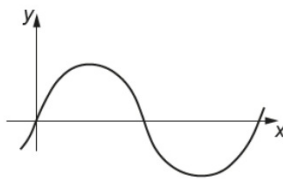
$$y = \frac{1}{x^2}$$

(a)



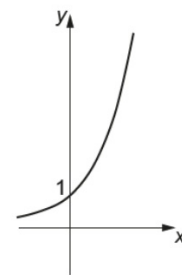
(a) $y = \frac{1}{x}$

(b)



(b) $y = \sin x$

(c)

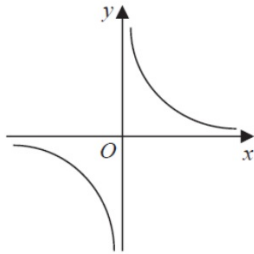


(c) $y = 2^x$

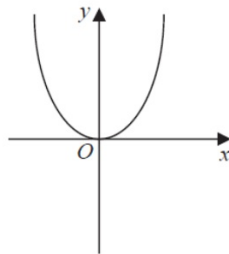
Edexcel

16 These graphs show four different proportionality relationships between y and x .

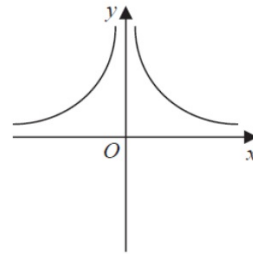
Video created by W Neill



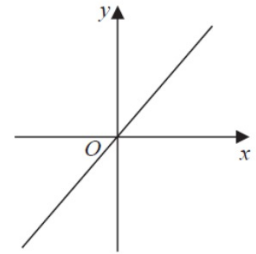
Graph A



Graph B



Graph C



Graph D

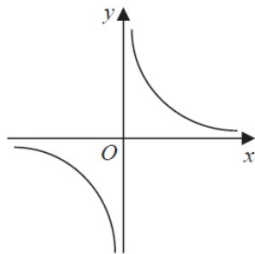
Match each graph with a statement in the table below.

Proportionality relationship	Graph letter
y is directly proportional to x	
y is inversely proportional to x	
y is proportional to the square of x	
y is inversely proportional to the square of x	

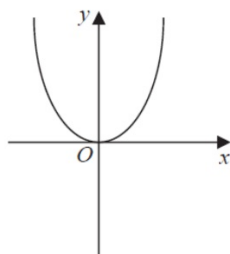
(Total for Question 16 is 2 marks)

16 These graphs show four different proportionality relationships between y and x .

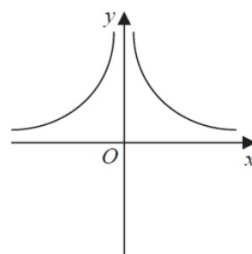
Video created by W Neill



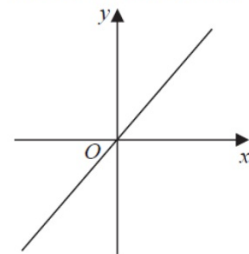
Graph A



Graph B

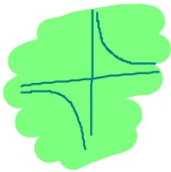


Graph C



Graph D

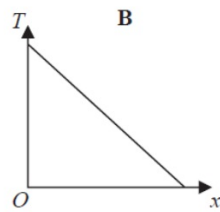
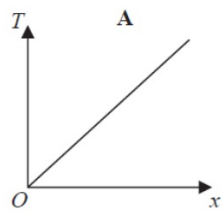
Match each graph with a statement in the table below.



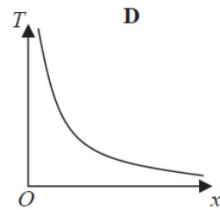
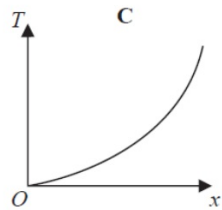
Proportionality relationship	Graph letter
y is directly proportional to x	D
y is inversely proportional to x	A
y is proportional to the square of x	B
y is inversely proportional to the square of x	C

(Total for Question 16 is 2 marks)

6 Here are four graphs.



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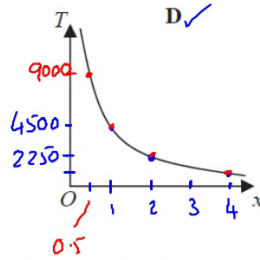
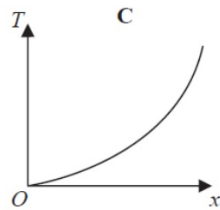
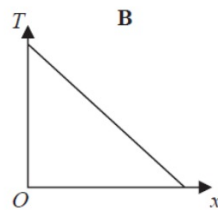
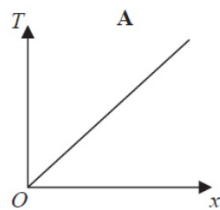
One of the graphs could show that T is inversely proportional to x .

(b) Write down the letter of this graph.

.....
(1)

(Total for Question 6 is 4 marks)

Here are four graphs.



Video created by W Neill

$$T = \frac{4500}{x}$$

$$x=1 \dots T = \frac{4500}{1} = 4500$$

$$x=2 \dots T = \frac{4500}{2} = 2250$$

$$x=4 \dots T = \frac{4500}{4} = 1125$$

$$x=0.5 \dots T = \frac{4500}{0.5} = 9000$$

$$x=0 \quad T = \frac{4500}{0} =$$

D ✓ (1)

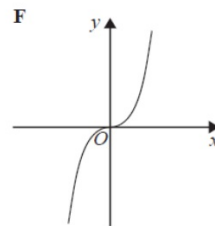
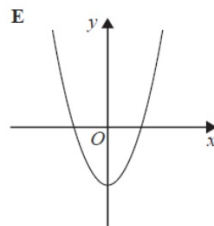
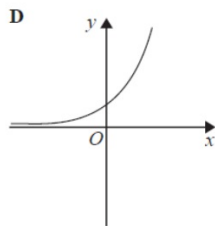
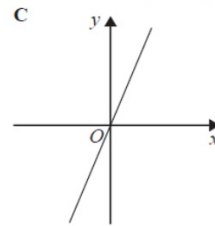
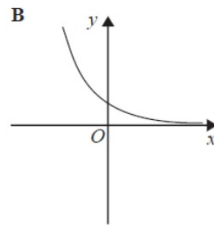
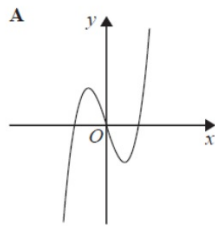
One of the graphs could show that T is inversely proportional to x .

(b) Write down the letter of this graph.

(Total for Question is 4 marks)

9 Here are six graphs.

Video created by W Neill



Write down the letter of the graph that could have the equation

(i) $y = 2^x$

.....

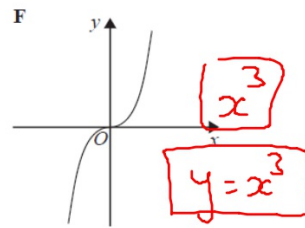
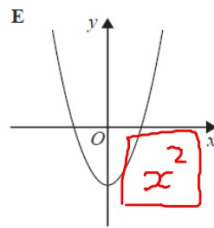
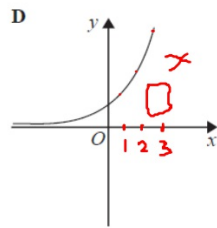
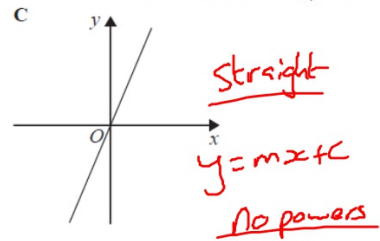
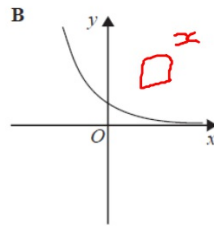
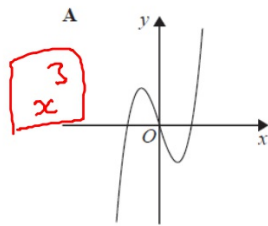
(ii) $y = x^3 - 3x$

.....

(Total for Question 9 is 2 marks)

9 Here are six graphs.

Video created by W Neill



Write down the letter of the graph that could have the equation

(i) $y = 2^x$

$$y = 2^1 \dots 2$$

$$2^2 \quad 4$$

$$2^3 \quad 8$$

D

(ii) $y = x^3 - 3x$

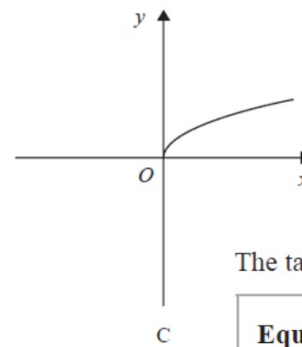
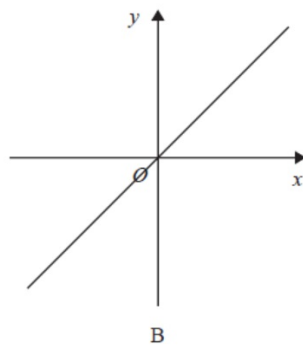
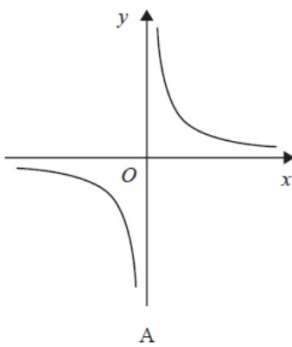
A

(Total for Question 9 is 2 marks)

13 Here are five graphs.

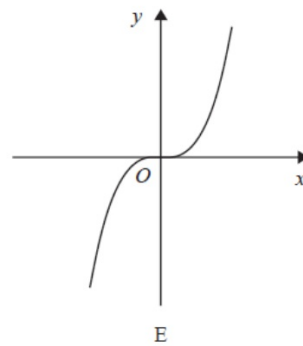
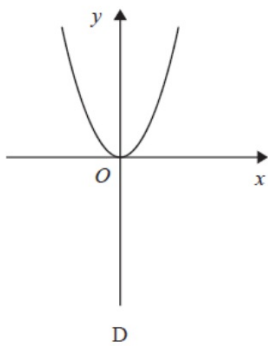
Created by W Neill

Each graph shows either direct proportion or inverse proportion.



The table shows five equations.

Equation	Graph
$y = kx^3$
$y = k\sqrt{x}$
$y = kx^2$
$y = \frac{k}{x}$
$y = kx$

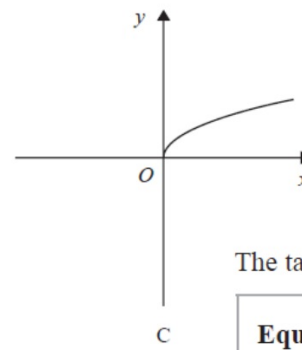
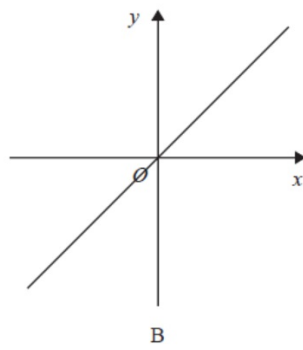
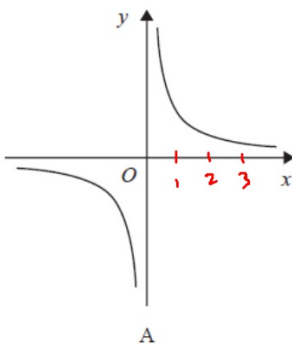


Match the letter of each graph to its equation.

13 Here are five graphs.

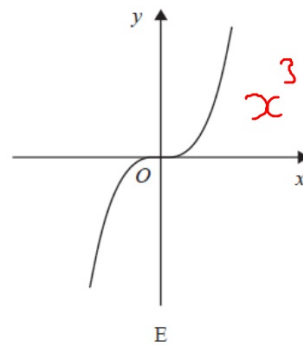
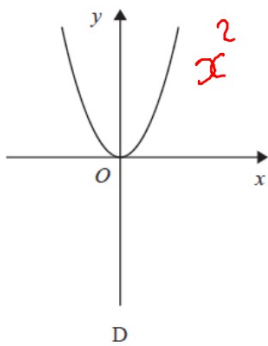
Created by W Neill

Each graph shows either direct proportion or inverse proportion.



The table shows five equations.

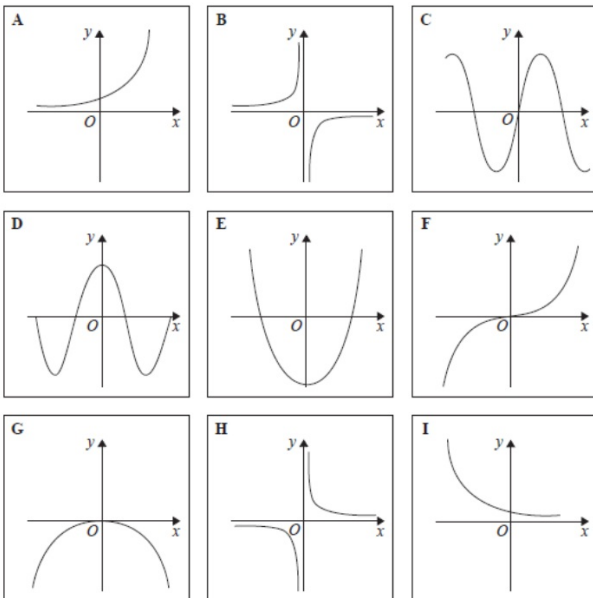
Equation	Graph
$y = kx^3$	<u>E</u>
$y = k\sqrt{x}$	<u>C</u>
$y = kx^2$	<u>D</u>
$y = \frac{k}{x}$	<u>A</u>
$y = kx$	<u>B</u>



Match the letter of each graph to its equation.

14 Here are some graphs.

Video created by W Neill

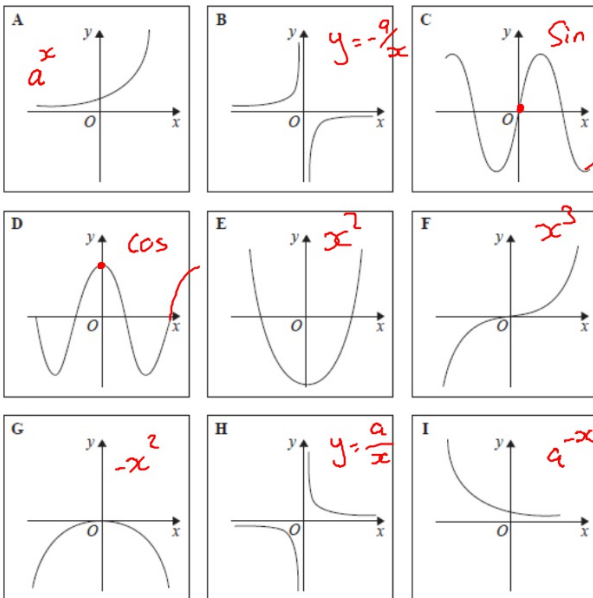


In the table below, match each equation with the letter of its graph.

Equation	Graph
$y = \sin x$	
$y = x^3 + 4x$	
$y = 2^x$	
$y = \frac{4}{x}$	

14 Here are some graphs.

Video created by W Neill

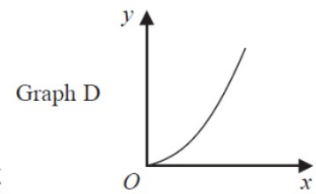
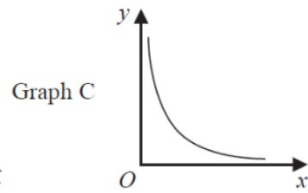
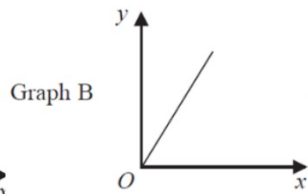
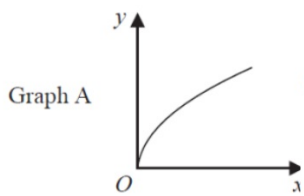


In the table below, match each equation with the letter of its graph.

Equation	Graph
$y = \sin x$	C
$y = x^3 + 4x$	F
$y = 2^x$	A
$y = \frac{4}{x}$	H

12 The graphs of y against x represent four different types of proportionality.

A79 Match each type of proportionality in the table to the correct graph.

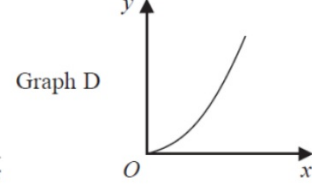
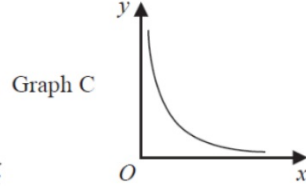
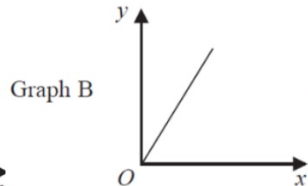
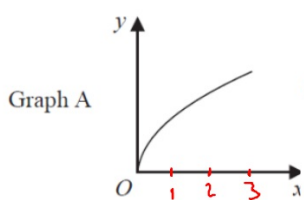


Type of proportionality	Graph letter
$y \propto x$	
$y \propto x^2$	
$y \propto \sqrt{x}$	
$y \propto \frac{1}{x}$	

(Total for Question 12 is 2 marks)

12 The graphs of y against x represent four different types of proportionality.

A79 Match each type of proportionality in the table to the correct graph.



Type of proportionality	Graph letter
$y \propto x$	B
$y \propto x^2$	D
$y \propto \sqrt{x}$ $x^{1/2}$	A
$y \propto \frac{1}{x}$	C

(Total for Question 12 is 2 marks)

AQA