HIGHER

7.8 Trigonometric and Exponential Graphs: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Evaluate the exponential function $y = 2^x$ at $x = 0$, $x = 1$ and $x = -1$.

(Total for Question 1 is 3 marks)

2 Write down the amplitude and the period (in degrees) of $y = 3\sin(2x)$.

(Total for Question 2 is 2 marks)

3 The graph of $y = 5(0.5)^x$ is sketched. State the horizontal asymptote and find the y-intercept.

(Total for Question 3 is 2 marks)

4 Solve $\sin x = 0.5$ for $0 \leq x < 360$ degrees. Give your answers in degrees.

(Total for Question 4 is 2 marks)

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Mark scheme · 7.8 Trigonometric and Exponential Graphs: 10-minute Pack

Question 1

$2^0 = 1$ cao	**B1**
$2^1 = 2$ cao	**B1**
$2^{-1} = 1/2$ cao	**B1**

Answer: At x=0: 1; x=1: 2; x=-1: 1/2.

Question 2

amplitude = 3 cao	**B1**
period = 360/2 = 180 degrees cao	**B1**

Answer: Amplitude = 3; period = 180 degrees.

Question 3

horizontal asymptote y = 0 cao	**B1**
y-intercept = 5 cao (when x = 0)	**B1**

Answer: Horizontal asymptote y = 0; y-intercept = 5.

Question 4

x = 30 degrees cao	**B1**
x = 150 degrees cao	**B1**

Answer: x = 30 degrees or x = 150 degrees.

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