WORKSHEET

Name: ..... Class: .....

Date: .....

MARK ____ / 21

Answer all questions. Show all your working — marks are awarded for method as well as the final answer.

1 Write down the amplitude of $y = 2 \sin x$. (1)

2 Write down the period of $y = \sin x$. (1)

3 Write down the range of $y = 2 \sin x + 1$. (2)

4 Describe the transformation from $y = \cos x$ to $y = \cos x + 1$. (2)

5 Write down the equations of the asymptotes of $y = \tan x$ for $x \in [0° ; 360°]$. (2)

6 Write down the maximum value of $y = 3\cos x - 1$. **(2)**

7 For what value of x in $[0° ; 360°]$ does $y = \sin x$ reach its minimum? **(1)**

8 What does a negative value of a do to $y = a\sin x$? **(1)**

9 The graph of $y = a\sin\theta + q$, where $a > 0$, has a maximum value of 7 and a minimum value of 1. Determine the values of a and q, and write down the equation of the graph. **(3)**

10 The graph of $y = a\cos\theta + q$, where $a > 0$, has a range of $[-5 ; 3]$. Determine a and q. **(3)**

11 A cosine graph passes through a MINIMUM at $\theta = 0°$ and has amplitude 2 with no vertical shift. Write down its equation and explain the sign of a. **(3)**

TOTAL: 21 marks

© Danemathics — free to print and share for classroom use.