# WORKSHEET

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

Date: .....

MARK ____ / 20

*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 $y = \sin 2x$. (1)

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

**4** Describe the transformation from $y = \cos x$ to $y = \cos(x + 60°)$. (2)

**5** Write down the period of $y = \tan 2x$. (1)

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

**7** How many complete cycles does $y = \sin 2x$ complete in $[0° ; 360°]$? **(1)**

**8** Write down the range of $y = \tan x$. **(1)**

**9** For $y = 4 \sin 3x$, write down the amplitude and the period, and state how many complete waves appear in $[0° ; 360°]$. **(3)**

**10** Describe fully the transformation from $y = \cos x$ to $y = -2 \cos(x + 45°)$. **(3)**

**11** The graph of $y = a \sin kx$, where $a > 0$ and $k > 0$, has amplitude $5$ and period $90°$. Determine $a$ and $k$, and write down the equation. **(3)**

**TOTAL: 20 marks**

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