WORKSHEET

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

Date: .....

MARK ____ / 26

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

1 Expand cos(A − B). (1)

2 Expand sin(A + B). (1)

3 Determine the exact value of cos 75° without a calculator. (3)

4 Determine the exact value of sin 15° without a calculator. (3)

5 Write down the three forms of $\cos 2A$. **(3)**

6 If $\sin\theta = \frac{3}{5}$ and θ is acute, determine $\cos 2\theta$. **(3)**

7 If $\sin\theta = \frac{3}{5}$ and θ is acute, determine $\sin 2\theta$. **(3)**

8 Prove that $\frac{\sin 2A}{1 + \cos 2A} = \tan A$, and state the restriction on A. **(5)**

9 Simplify $2 \sin 15° \cos 15°$. **(2)**

10 Why is $\sin(A + B) \neq \sin A + \sin B$? **(2)**

TOTAL: 26 marks

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