Student ID		

Last Name: _____

First Name: _____

Show all your work.
If necessary, use extra sheets.

When appropriate,
BOX your final answer.

MA1
Homework
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1. If $\cos\theta = \frac{2}{3}$ and $0 < \theta \le \frac{\pi}{2}$, find (a) $\sin 2\theta$ and (b) $\cos 2\theta$

2. Express 165° in radians.

3. Express $\frac{7\pi}{6}$ in degrees.

4. Solve for θ in the interval $0 < x \le 360°$ to the nearest degree: $\sin^2\theta + 2 = 4\sin\theta$

5. The expression $4 + \cos^2 A$ is equivalent to

   (A) $5 - \sec^2 A$ (B) $5 - \sin^2 A$ (C) $5 + \sin^2 A$ (D) $\dfrac{5}{\sec^2 A}$

6. If $\cos\theta = k$, then the value of $(\cos\theta)(\sin\theta)(\cot\theta)$ is

   (A) 1 (B) k^2
   (C) k (D) $\frac{1}{k}$

7. The value of $\cot\left(\arctan\left(-\dfrac{\sqrt{5}}{2}\right)\right)$ is which of the following?

   (A) { } (B) $-\dfrac{2\sqrt{5}}{5}$ (C) $\dfrac{2\sqrt{5}}{5}$ (D) $\dfrac{\sqrt{5}}{2}$

8. If θ is a positive acute angle and $\cos\theta = c$, find the value of $\sin^2 2\theta$ in terms of c.