Name:

Show all work clearly and in order. Please box your answers.

- 1. Suppose  $x = \sin(\theta)$  and  $-\pi/2 \le \theta \le \pi/2$ .
  - (a) Draw the corresponding right triangle:
  - (b)  $\sin(\theta) =$
  - (c)  $\cos(\theta) =$
  - (d)  $\tan(\theta) =$
- 2. Suppose  $x = 3\sin(\theta)$  and  $-\pi/2 \le \theta \le \pi/2$ .
  - (a) Draw the corresponding right triangle:
  - (b)  $\sin(\theta) =$
  - (c)  $\cos(\theta) =$
  - (d)  $\tan(\theta) =$
- 3. Suppose x = 2 tan(θ) and -π/2 < θ < π/2.</li>
  (a) Draw the corresponding right triangle:
  - (b)  $\sin(\theta) =$
  - (c)  $\cos(\theta) =$
  - (d)  $\tan(\theta) =$

4. Suppose  $x = 5 \sec(\theta)$  and  $[0 \le \theta < \pi/2 \text{ OR } \pi \le \theta < 3\pi/2]$ .

- (a) Draw the corresponding right triangle:
- (b)  $\sin(\theta) =$
- (c)  $\cos(\theta) =$
- (d)  $\tan(\theta) =$
- 5. Complete the square for each of the following:
  - (a)  $5 + 4x x^2 =$ (b)  $x^2 + x + 1 =$ (c)  $x^2 + 2x =$ (d)  $x^2 - 2x + 2 =$ (e)  $x^2 - 4x + 8 =$