Question 1

For a terminal arm created by the point $P(-3, -6)$,

- **(a)** Sketch a diagram of this, labeling the principal angle θ and the related acute angle α.
- **(b)** Determine the exact value of r and then state the exact values of the three primary trig ratios of the angle θ. (reduce radicals and fractions) \

r= \

$Sin(\theta)$ \

$Cos(\theta)$ \

$Tan(\theta)$

- **©** Determine α and θ to 1 decimal place.

Question 2

Determine the **exact** value of $\sec(210^\circ)$ by drawing a diagram of the terminal arm on the Cartesian plane, and appropriate special triangle with side lengths and Angles.

$\sec(210^\circ)$ =

Question 3

For $\cos(A) = -\frac{2}{3}$, where $0^\circ \leq A \leq 360^\circ$,

- **(i)** sketch the possible positions of the terminal arms for angle A on the Cartesian plane,
- **(ii)** determine the exact values of $\tan(A)$,
- **(iii)** determine all values for A to 1 decimal place.