MA 137 Worksheet #11

Section 3.4
9/17/20

1. Find the following limits:

- $\lim_{x\to 0} x\cos\left(\frac{3}{x^2}\right)$
- $\lim_{x\to 0} \frac{\sin(\pi x/2)}{2x}$
- $\lim_{x\to -\frac{1}{2}} \frac{\sin(2x+1)}{5+9x-2x^2}$
- $\lim_{x\to 0} \frac{\sin x(1-\cos x)}{x^3}$

2. Set up the formula for $\frac{A(\theta)}{B(\theta)}$ where $A(\theta)$ is the area of the semicircle and $B(\theta)$ is the area of the triangle, both in terms of angle θ.