**Last Name:** _____

**First Name:** _____

**Student ID:** _____

# Quiz 1

**Question 1.** *(4 marks)* Simplify the following expression (positive exponents only):

$$\left( \frac{4a^{5/6}b^{-1/5}}{a^{2/3}b^2} \right)^{-1/2}$$

**Question 2.** *(3 marks)* Solve for $x$:

$$\frac{4x - 2(x - 4)}{3} = 8$$

**Question 3.** *(3 marks)* Solve for $P$:

$$\frac{p}{P} = \frac{AI}{B+AI}$$

**Question 4.** *(5 marks)* Find the equation of the line that is perpenedicular to the line 6x+3y=7 and passes through (12,2). Graph this line (neatly).

**Question 5.** *(4 marks)* The velocity of sound $v$ increases 0.607m/s for each increase in temperature $T$ of 1.00°C. If $v = 343$m/s for $T = 20.0$°C, express $v$ as a function of $T$.