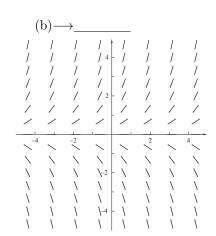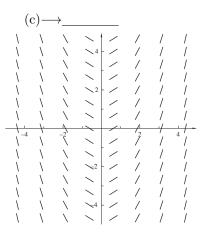# Math 252

Names:_____

Show all relevant work!
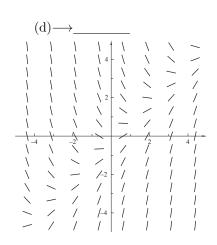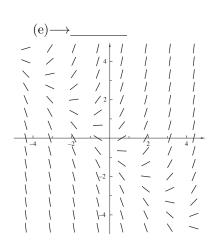
1. Match each of the slope field graphs with the formula that fits it best(i – vii). Note there are more choices than graphs.
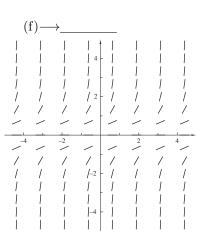
(a)⟶_____

(b)⟶_____

(c)⟶_____

(d)⟶_____

(e)⟶_____

(f)⟶_____

(i) $\dfrac{dy}{dx} = x$ (ii) $\dfrac{dy}{dx} = x - y$ (iii) $\dfrac{dy}{dx} = x + y$ (iv) $\dfrac{dy}{dx} = -y$ (v) $\dfrac{dy}{dx} = y$ (vi) $\dfrac{dy}{dx} = y^2$

2. Sketch several sample solutions for each slope field. Observe any stable or unstable equilibria.

3. Consider the differential equation $\dfrac{dy}{dx} = 2x - y$. On the axes below, sketch a slope field for the given equation at the six points indicated.