

Wednesday - February 17, 2016

$$9x - 7u > 3(3x - 7u)$$
$$9x - 21u$$
$$-7i > -21u$$
$$i < 3u$$

$$\textcircled{83} \quad x \frac{dy}{dx} - (2xe^{-y/x} + y) dx = 0$$

$$u = vx$$

$$\textcircled{(1,0)} \quad v = \frac{y}{x}$$

$$x d(vx) - (2xe^{-v} + vx) dx = 0$$

$$x(v dx + x dv) - (2xe^{-v} + vx) dx = 0$$

$$xv dx + x^2 dv - 2xe^{-v} dx - vx dx = 0$$

$$x^2 dv = 2xe^{-v} dx$$

$$\frac{1}{e^{-v}} dv = \frac{2}{x} dx$$

$$\int e^v dv = \int \frac{2}{x} dx$$

$$e^{x/y} = 2 \ln|x| + c$$

$$e^{x/y} = \ln x^2 + c$$

$$e^{1/0} = \ln 1 + c$$

$$1 = 0 + c$$

$$e^{x/y} = (\ln x^2) + 1$$