Section 4.3 Answers

1) $\dfrac{dy}{dx} = \dfrac{3x+2}{y}$

3) $\dfrac{dy}{dx} = \dfrac{4x+4}{5}$

5) $\dfrac{dy}{dx} = \dfrac{10x+3}{2y+3}$

7) $\dfrac{dy}{dx} = \dfrac{2x-4}{6y-1} \ or \ \dfrac{2(x-2)}{6y-1}$

9) $\dfrac{dy}{dx} = \dfrac{1}{2y-6} = \dfrac{1}{2(y-3)}$

11) $\dfrac{dy}{dx} = \dfrac{4}{-2y+3} = \dfrac{-4}{2y-3}$

13) $\dfrac{dy}{dx} = \dfrac{6x-y+5}{x}$

15) $\dfrac{dy}{dx} = \dfrac{15x^2+6x-5y}{5x} \ or \ 3x + \dfrac{6}{5} - \dfrac{y}{x}$

17) $y = \dfrac{5}{2}x - \dfrac{1}{2}$

19) $y = 9x - 19$

21) $\dfrac{dr}{dt} = \dfrac{\frac{dC}{dt}}{2\pi}$

23) $\dfrac{dr}{dt} = \dfrac{\frac{dA}{dt}}{10r}$

25) $\dfrac{dr}{dt} = \dfrac{\frac{dV}{dt}}{12r}$

27) $\dfrac{dr}{dt} = \dfrac{\frac{dV}{dt}}{2\pi r^2}$