

[Submitting HW Tips](#)**HW #2**

- 1** **Section 2.1:** #1(c), 9, 15, 18.
- 2** **Section 2.2:** #2, 11, 15, 18, 19, 28(a)(b).
- 3** **(a)** Find the general solution to $\frac{dy}{dx} = \frac{8x^2 - y^2}{xy}$ ($x > 0$)

(b) Solve this **IVP** :
$$\begin{cases} \frac{dy}{dx} = \frac{8x^2 - y^2}{xy} \\ y(1) = 2 \end{cases}.$$

- 4** Solve this differential equation: $\frac{dy}{dx} = \frac{y + \sqrt{x^2 - y^2}}{x}$ ($x > 0$).