

$$\boxed{77} \text{ (a) } D = \frac{1.05(88^2 - 44^2)}{27 + 64.4 \sin 3^\circ} \approx 201 \text{ ft}$$

$$\text{(b) } D = \frac{1.05(88^2 - 44^2)}{27 + 64.4 \sin(-3^\circ)} \approx 258 \text{ ft}$$

(c) When the slope is negative (down hill) the car will require a greater stopping distance.