

10. $\tan(x - y)$ if $\tan x = \frac{5}{4}$ and $\sec y = 2$

$$\frac{\tan x - \tan y}{1 + \tan x \tan y}$$

$$\begin{aligned}\tan^2 y + 1 &= 2^2 \\ \tan^2 y &= 3 \\ \tan y &= \sqrt{3}\end{aligned}$$

$$\frac{\frac{5}{4} - \sqrt{3}}{1 + (\frac{5}{4})(\sqrt{3})} = \frac{\frac{5}{4} - \frac{4\sqrt{3}}{4}}{\frac{4}{4} + \frac{5\sqrt{3}}{4}} = \frac{\frac{5-4\sqrt{3}}{4}}{\frac{4+5\sqrt{3}}{4}}$$

$$= \frac{5-4\sqrt{3}}{4} \cdot \frac{4}{4+5\sqrt{3}} = \frac{5-4\sqrt{3}}{4+5\sqrt{3}} \left(\frac{4-5\sqrt{3}}{4-5\sqrt{3}} \right) = \frac{20-25\sqrt{3}-16\sqrt{3}+60}{16-75}$$

$$= \frac{80-41\sqrt{3}}{-59}$$

$$= \frac{-80+41\sqrt{3}}{59}$$

p. 442-443
26-29.
16, 20, 22
34, 38
64

Quiz Monday
Section 7.1-7.3

Worksheet due
Friday