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

$$
\begin{aligned}
& \frac{\tan x-\tan y}{1+\tan x \tan y} \\
& \tan ^{2} y+1=2^{\alpha} \\
& \tan ^{2} y=3 \\
& \frac{\frac{5}{4}-\sqrt{3}}{1+\left(\frac{5}{4}\right)(\sqrt{3})}=\frac{\frac{5}{4}-\frac{4 \sqrt{3}}{\frac{4}{4}+\frac{5-\sqrt{3}}{4}}=\frac{\tan y=\sqrt{3}}{\frac{5-4 \sqrt{3}}{(4)}}}{\frac{4+5 \sqrt{3}}{4}} \\
& =\frac{5-4 \sqrt{3}}{4} \cdot \frac{4}{4+5 \sqrt{3}}=\frac{5-4 \sqrt{3}}{4+5 \sqrt{3}} \cdot \frac{4-5 \sqrt{3}}{4-5 \sqrt{3}} \\
& \begin{aligned}
=\frac{20-25 \sqrt{3}-16 \sqrt{3}+60}{16-75} & =\frac{80-41 \sqrt{3}}{-59} \\
& =\frac{-80+41 \sqrt{3}}{59}
\end{aligned}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 9. } \cos (x+y) \text { if } \sin x=\frac{2}{3} \text { and } \sin y=\frac{3}{4} \\
& \begin{aligned}
& \cos x \cos y-\sin x \sin y \\
= & \left(\frac{\sqrt{5}}{3}\right)\left(\frac{\sqrt{3}}{4}\right)-\left(\frac{2}{3}\right)\left(\frac{3}{4}\right)
\end{aligned} \\
& =\frac{\sqrt{35}-6}{12} \quad \begin{array}{r}
\cos x=\frac{\sqrt{5}}{3} \\
\left(\frac{3}{4}\right)^{2}+\cos ^{2} y=1 \\
\cos ^{2} y=\frac{7}{16} \\
\cos y=\frac{\sqrt{7}}{4}
\end{array} \\
& \begin{array}{r}
\left(\frac{2}{3}\right)^{2}+\cos ^{2} x=1 \\
\cos ^{2} x=\frac{5}{9}
\end{array} \\
& \text { p. } 442-443 \\
& \text { 26-29 } \\
& \text { 16,20,22 } \\
& 34,38 \\
& 64 \\
& \text { Quiz Monday } \\
& \text { Sections 7.1-7.3 } \\
& \text { Worksheet } \\
& \text { due Friday }
\end{aligned}
$$

