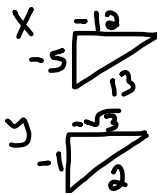


38. a.  $\sin(x+y)$   
 b.  $\cos(x+y)$   
 c.  $\sin(x-y)$   
 d.  $\tan(x+y)$



$$-\frac{5}{13} \cdot \frac{\sqrt{3}}{2} + -\frac{12}{13} \cdot \frac{1}{2}$$

$$\frac{5\sqrt{3}}{26} + \frac{12}{26} \quad \left( \frac{12+5\sqrt{3}}{26} \right)$$

$$\cos x \cos y - \sin x \sin y$$

$$-\frac{12}{13} \cdot \frac{\sqrt{3}}{2} - \frac{5}{13} \cdot \frac{1}{2}$$

$$\frac{12\sqrt{3}}{26} - \frac{5}{26}$$

$$\left( \frac{-5+12\sqrt{3}}{26} \right)$$

$$\sin x \cos y - \cos x \sin y$$

$$\frac{5}{13} \cdot \frac{\sqrt{3}}{2} - \frac{12}{13} \cdot \frac{1}{2}$$

$$\frac{5\sqrt{3}}{26} - \frac{12}{26}$$

$$\left( \frac{-12+5\sqrt{3}}{26} \right)$$

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

$$\frac{\frac{5}{12} - \frac{1}{\sqrt{3}}}{1 + \frac{5}{12} \left( \frac{1}{\sqrt{3}} \right)}$$

$$\frac{\frac{5-4\sqrt{3}}{12}}{1 + \frac{5\sqrt{3}}{36}}$$

$$\frac{\frac{5-4\sqrt{3}}{12} \cdot \frac{36}{5\sqrt{3}+36}}{\frac{5\sqrt{3}+36}{36} \cdot \frac{36}{5\sqrt{3}+36}}$$

$$\frac{180 - 144\sqrt{3}}{60\sqrt{3} + 432}$$

$$\frac{15 - 12\sqrt{3}}{5\sqrt{3} + 36}$$

$$\frac{507\sqrt{3} - 720}{-1221}$$

$$\frac{169\sqrt{3} - 240}{-407}$$

$$\frac{75\sqrt{3} - 540 - 180 + 432\sqrt{3}}{75 - 1296 - 1221}$$

$$\left( \frac{240 - 169\sqrt{3}}{407} \right)$$

38 b.