

SUM AND DIFFERENCE IDENTITIES FOR COSINE

$$\cos(A + B) = \cos A \cos B - \sin A \sin B$$

$$\cos(A - B) = \cos A \cos B + \sin A \sin B$$

1. Use the sum or difference identities to find the exact value.

$$\cos 15^\circ$$

2. Find the exact value of each trigonometric function, given:

$$\sin u = \frac{4}{5}, \text{ where } 0 < u < \frac{\pi}{2} \text{ and}$$

$$\cos v = -\frac{12}{13}, \text{ where } \frac{\pi}{2} < v < \pi.$$

a. $\cos(u + v)$

b. $\cos(v - u)$