

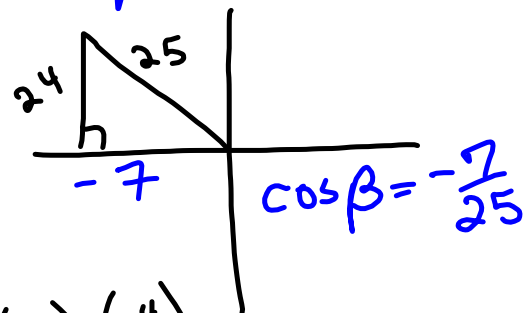
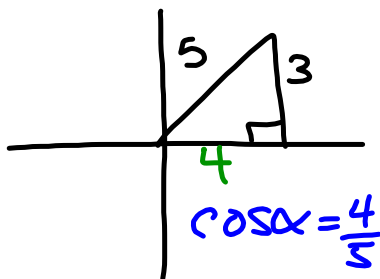
6.2 continued

$$1. \sin \alpha = \frac{3}{5} \quad \sin \beta = -\frac{24}{25}$$

$$0 < \alpha < \frac{\pi}{2}$$

$$\frac{\pi}{2} < \beta < \pi$$

$$\sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta$$



$$\begin{aligned} \sin(\alpha + \beta) &\Rightarrow \left(\frac{3}{5}\right)\left(-\frac{7}{25}\right) + \left(\frac{4}{5}\right)\left(\frac{24}{25}\right) \\ &= \frac{-21}{125} + \frac{96}{125} = \frac{75}{125} = \frac{3}{5} \end{aligned}$$

**BLM 6-3 Section 6.2 Extra Practice**

1. a)  $\sin 63^\circ$  b)  $\cos 17^\circ$

c)  $\cos\left(-\frac{\pi}{6}\right)$  d)  $\sin\left(\frac{\pi}{12}\right)$

2. a)  $\frac{1}{2}$  b)  $\frac{\sqrt{3}}{2}$  c) 1 d)  $\frac{1}{\sqrt{2}}$

3. a)  $\sin \frac{\pi}{3}$  b)  $\cos \frac{2\pi}{3}$

c)  $\cos 30^\circ$  d)  $\tan \frac{\pi}{3}$

4. a)  $\cos A$  b)  $-\sin A$  c)  $-\sin A$  d)  $\cos A$

5. a)  $\cos A$  b)  $-\cos A$  c)  $\cos A$  d)  $-\sin A$

6. a)  $\cos \theta$  b)  $\cos(4x)$  c)  $-\sin \theta$  d)  $-\sin \theta$

7. a)  $-\frac{1}{2}$  b)  $2 - \sqrt{3}$  c)  $\frac{\sqrt{3} + 1}{2\sqrt{2}}$  d)  $-\frac{\sqrt{3}}{2}$

8. a) true b) false c) true d) false

9. a)  $\frac{56}{65}$  b)  $\frac{63}{65}$  c)  $\frac{-119}{169}$  d)  $\frac{24}{25}$

10)  $-\frac{120}{169}$