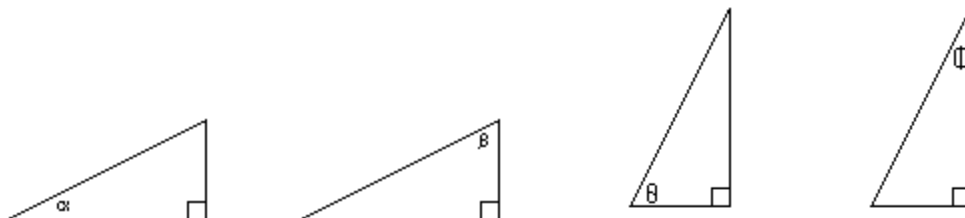
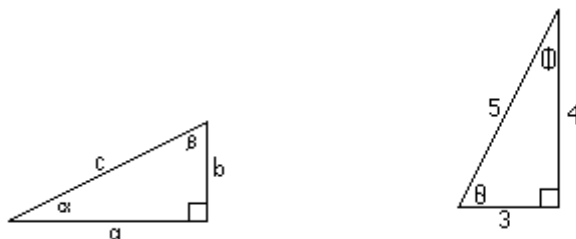


Basic Trigonometric Ratios
 Jefferson Davis Learning Center
 Sandra Peterson

Use the indicated angle in each triangle to label the sides as *opposite*, *adjacent*, or *hypotenuse*.

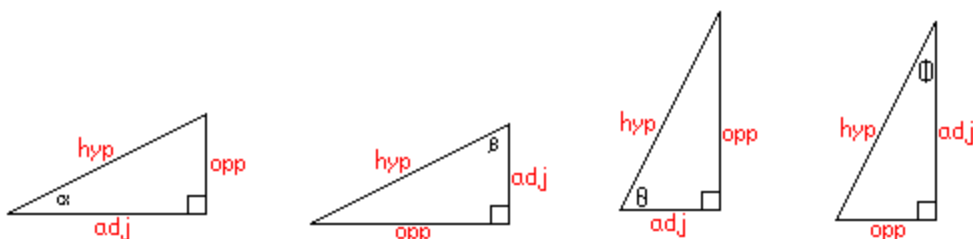


Use the following triangles to determine the given trigonometric ratios.



- | | | | |
|---------------------------|---------------------------|---------------------------|---------------------------|
| 1. $\sin \alpha =$ _____ | 2. $\cos \alpha =$ _____ | 3. $\tan \alpha =$ _____ | 4. $\cot \alpha =$ _____ |
| 5. $\sec \alpha =$ _____ | 6. $\csc \alpha =$ _____ | 7. $\sin \beta =$ _____ | 8. $\cos \beta =$ _____ |
| 9. $\tan \beta =$ _____ | 10. $\cot \beta =$ _____ | 11. $\sec \beta =$ _____ | 12. $\csc \beta =$ _____ |
| 13. $\sin \theta =$ _____ | 14. $\cos \theta =$ _____ | 15. $\tan \theta =$ _____ | 16. $\cot \theta =$ _____ |
| 17. $\sec \theta =$ _____ | 18. $\csc \theta =$ _____ | 19. $\sin \phi =$ _____ | 20. $\cos \phi =$ _____ |
| 21. $\tan \phi =$ _____ | 22. $\cot \phi =$ _____ | 23. $\sec \phi =$ _____ | 24. $\csc \phi =$ _____ |

Answers:



- | | | | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1. $\frac{b}{c}$ | 2. $\frac{a}{c}$ | 3. $\frac{b}{a}$ | 4. $\frac{a}{b}$ | 5. $\frac{c}{a}$ | 6. $\frac{c}{b}$ |
| 7. $\frac{a}{c}$ | 8. $\frac{b}{c}$ | 9. $\frac{a}{b}$ | 10. $\frac{b}{a}$ | 11. $\frac{c}{b}$ | 12. $\frac{c}{a}$ |
| 13. $\frac{4}{5}$ | 14. $\frac{3}{5}$ | 15. $\frac{4}{3}$ | 16. $\frac{3}{4}$ | 17. $\frac{5}{3}$ | 18. $\frac{5}{4}$ |
| 19. $\frac{3}{5}$ | 20. $\frac{4}{5}$ | 21. $\frac{3}{4}$ | 22. $\frac{4}{3}$ | 23. $\frac{5}{4}$ | 24. $\frac{5}{3}$ |

Please visit the Learning Center for further assistance.