Trigonometry Basics Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part I: Using the given triangle in each problem state which side is adjacent and opposite to the given angle. Also, state the hypotenuse.**



1. adjacent to  \_\_\_\_\_ opposite to \_\_\_\_\_

adjacent to \_\_\_\_\_ opposite to \_\_\_\_\_

 hypotenuse \_\_\_\_\_



2. adjacent to  \_\_\_\_\_ opposite to \_\_\_\_\_

 adjacent to \_\_\_\_\_ opposite to \_\_\_\_\_

 hypotenuse \_\_\_\_\_

**Part II: Find the missing side length of the right triangle. Then state the three trig ratios for  (leave all answers in fraction form).**



3. 4. 5.

  

  

  

**Part III: a) Use a calculator to approximate the given value to four decimal places.**

6. sin 42° 7. tan 81° 8. cos 56°

**Part IV:** **Write the expression in terms of cosine or sine**.

9. cos 81°10. sin 81° 11. cos 24°

12. sin 75° 13. cos 2° 14. sin 57.5°

**Part V: Use the given ratio and find the given ratio (HINT: draw a triangle)**

15. $\sin(\left(θ\right))=\frac{3}{4}$, find $cos⁡(θ)$ 16. $\tan(\left(θ\right))=\frac{3}{\sqrt{4}}$, find $sin⁡(θ)$

17. $\cos(\left(θ\right))=\frac{\sqrt{2}}{7}$, find $sin⁡(θ)$ 18. $\sin(\left(θ\right))=\frac{24}{30}$, find $tan⁡(θ)$

**Part VI: Use the given ratio and ALL the OTHER ratios (HINT: draw a triangle)**

19. $\sin(\left(θ\right))=\frac{\sqrt{3}}{2}$ 20. $\tan(\left(θ\right))=1$