

Work in groups of 4 to complete the following problems. Notice, these logarithms have base a, so they are completely made up and imaginary! The only way you can simplify them is by using the properties of logarithms!

GIVENS

$$\log_a 2 = 1.8$$

$$\log_a 5 = 2.7$$

$$\log_a 6 = 3.9$$

1. $\log_a 10 =$	2. $\log_a 3 =$
3. $\log_a 15 =$	4. $\log_a 24 =$
5. $\log_a 18 =$	6. $\log_a 100 =$

NEW SET OF GIVENS! DO NOT USE THE GIVENS FROM THE FIRST SECTION!

$$\log_a 3 = 5.3$$

$$\log_a 7 = 6.8$$

$$\log_a 8 = 8.5$$

7. $\log_a 2 + \log_a 4 =$	8. $\log_a 14 - \log_a 2 =$
9. $2\log_a 4 - \log_a 2 =$	10. $\log_a \frac{21}{8} =$
11. $2\log_a 6 - \log_a 4 - \log_a 3$	12. $2\log_a 6 - 2\log_a 2$

Answer Key

- 1) 4.5
- 2) 2.1
- 3) 4.8
- 4) 9.6
- 5) 6
- 6) 9
- 7) 8.5
- 8) 6.8
- 9) 8.5
- 10) 3.6
- 11) 5.3
- 12) 10.6