

This is a collection of some of the more difficult concepts a student would have encountered before grade 6. Do your best to answer each question. You can use additional sheets of paper. If you don't know how to solve a problem then now is a great time to learn.

1. How many 3×3 squares can fit inside a rectangle with a height of 24 and width of 18?
2. Write the prime factorization of 200. (I.e. write 200 as a product of prime numbers.)
3. What is the value of 64×681 ?
4. If today is Tuesday, what day of the week will it be 100 days from now?
5. Which is bigger: $3\frac{5}{7} + 5\frac{3}{7}$ or $2\frac{4}{7} \times 3$?
6. A store has marked the price of each DVD at \$16.99 each. However, a sale sign indicates that the price of each DVD is reduced by \$5. Write an expression (number sentence) that will give the price of 6 DVDs in dollars. Then find the price for 6 DVDs.
7. Write the number 22 million, 14 thousand, 733.
8. What does the digit 4 mean in the number 652,488,608?
9. It costs \$6 to ride a roller coaster. How many roller coaster rides can a person have for \$728?
10. A 12 ft long board is cut into pieces that are $\frac{3}{4}$ of a foot in length. How many total pieces are obtained?
11. Place the following six values in order from least to greatest? $1^6, 2^5, 3^4, 4^3, 5^2, 6^1$
12. John claims that when you divide 10 by a number the result will be less than 10. Give an example of a number you could use to show that John is incorrect.
13. A rectangular prism has a volume of 84 cm^3 . Its height is 3 cm, and its width is 4 cm. What is its length?
14. Place the following values in order from least to greatest.
 $5.6, \frac{23}{4}, 5.19, 5\frac{1}{2}, 6\frac{1}{20}$
15. An ant starts at the point with coordinates (4, 7). It crawls 3 units East, 5 units South, and then 6 units West. What are the coordinates of the point where the ant is now?

