



# OCTOBER CHALLENGE



Name \_\_\_\_\_

Calculators may be used.

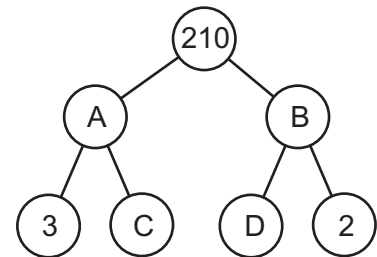
1. floor In a building with floors 1 through 7, on which floor would you be if the walk to the seventh floor is twice as long as the walk to the first floor?

2. biscuits Beginning with the second day of a seven-day week, Potter ate 4 more dog biscuits each day than he had eaten the previous day. He ate a total of 105 biscuits during the week. How many biscuits did he eat on the fifth day?

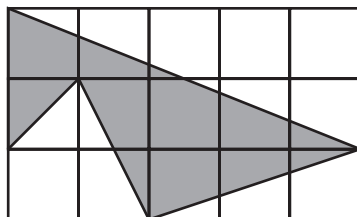


3. integers How many distinct three-digit positive integers can be written with the digits 1, 2, 3 and 4 if no digit may be used more than once in a three-digit integer?

4. \_\_\_\_\_ What is the largest possible value of  $A + B + C + D$  in the prime factorization tree shown?



5. sq cm



Each of the 15 small squares in the figure to the left has an area of 6 square centimeters. What is the number of square centimeters in the area of the shaded region?