

5A *Time: 4 minutes*

How many 2-digit numbers are there in which the ones digit is greater than the tens digit?

5B *Time: 5 minutes*

A bank has two plans for checking accounts. In plan A, the charge is \$7.50 a month with no fee for each check. In plan B, the charge is \$3 a month plus an additional 20 cents for each check written. What is the least number of checks a customer must write each month so that plan A costs less than plan B?

5C *Time: 5 minutes*

Suppose the base of a triangle is increased by 20%, and its height is increased by 30%. By what percent is the area of the triangle increased?

5D *Time: 6 minutes*

Starting with 1, Sara lists the counting numbers in order but omits all those that use the digit 9. What is the 300th number on her list?

5E *Time: 8 minutes*

Line segments form a path that starts at (0,0), is drawn to (1,0), and then to (1,2). Each new segment forms a right angle with the segment before it and is 1 unit longer than that segment. The path ends at (0,0). How many segments are in the shortest possible path?

(Hint: Consider horizontal and vertical segments separately.)