

# ATLANTIC-PACIFIC MATHEMATICS LEAGUE

## High School League No Calculators Permitted

Name \_\_\_\_\_

Grade Level \_\_\_\_\_

Score \_\_\_\_\_

Time 30 Minutes

Math Teacher \_\_\_\_\_

### Answer Column

1.1 From a group of males and females, 15 females leave. There are now twice as many males as females. Later 45 males leave. Now there are 5 females for each male. What was the original number of females?

1.2 Let  $N$  be the number of integers between 35,000 and 45,000 that are squares of integers. Find  $N$ .

1.3 If  $S = \frac{W_1 - W_2}{W_3 - W_2}$ , solve for  $W_2$ .

1.4 Change  $(10110)_2$  to a base ten numeral.

1.5 The area of an isosceles right triangle is 8. Find its perimeter.

1.6 Simplify  $36^{\sqrt{5}} \div 6^{\sqrt{20}}$ .