Solutions:

WEEK 1 SOLUTION:

Find the number of palindromes there are between 0 and 1000.
90 (11, 22... 99, 111, 121...191, 212, 222...292, 313, 323...393, 414, 424...494, 515, 525... 595, 616, 626...696, 717, 727...797, 818, 828...898, 919, 929...999)

Write a phrase or sentence that is a palindrome.
Answers may vary. (Examples: Desserts, I stressed!, Never odd or even.)

WEEK 2 SOLUTION:

The lowest three digit palindrome is 101.
The highest three digit palindrome is 999.
The total miles traveled is 999 – 101 = 898 miles.
898 miles ÷ 55 mph = 16.33 hours (rounded)

It would take 16 hours and 20 minutes to finish the trip.

WEEK 3 SOLUTION:

The distance from Earth to Moon is 238,900 miles.
238,900 miles ÷ 55 mph = 4343.6364 hours (rounded)
4343.6364 hours ÷ 24 = 180.98 days

You would arrive on the moon the evening of June 29th.

WEEK 4 SOLUTION:

A mile is 5280 feet. A highway lane is 12 feet wide. The area of one lane in one mile of highway is 63, 360 square feet (12 feet x 5280 feet). One gallon of paint covers 500 square feet. You will need 127 gallons (63,360 ÷ 500 = 126.72; you cannot purchase part of a gallon so you have to round up). To paint all four lanes, you will need 508 gallons of paint (127 gallons x 4 lanes).

WEEK 5 SOLUTION:

The UNION is 4/10 of the FLY.   9 ½ x 4/10 = 38/10 feet

The UNION is 7/13 of the HOIST.   5 x 7/13 = 35/13 feet

Area = length x width
38/10 feet x 35/13 feet = 1330/130 = 10 30/130 = 103/13 square feet

The area of the UNION is 10 3/13 square feet.

Solutions:

WEEK 6 SOLUTION:

The perimeter of an individual rectangle:

w + 5w + w + 5w = 60

12w = 60

W = 5

The width of each rectangle is 5 meters.

Each side of the square is 5w meters, which would be 5(5) or 25 meters. So, the perimeter of the square is 4(25) which is 100 meters.

The club would need to purchase 100 meters of fencing material to enclose the garden.

WEEK 7 SOLUTION:

An earthquake measuring 2 on the Richter Scale is 10 times stronger than an earthquake measuring 1 on the Richter Scale.

An earthquake measuring 3 on the Richter Scale is 100 times stronger than an earthquake measuring 1.

An earthquake measuring 8 on the Richter Scale is 10,000,000 times stronger than an earthquake measuring 1 and 1,000,000 times stronger than an earthquake measuring 2.

WEEK 8 SOLUTION:

The Eiffel Tower is 1, 052 feet 4 inches tall (including the TV mast).

1,052 x 12 = 12,624 inches

12,624 + 4 = 12,628 inches

This is the height of the Eiffel Tower in inches.

12,628 ÷ 7 ½ = 1683.73

It would take 1684 pencils to reach the top of the Eiffel Tower.

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