

Basic College Mathematics – Midterm Review

Name: _____ Date: _____

1. We are mixing a chemical compound with component A (3.5 parts) to a component B (7.5 parts). We have 32 liters of component A. How much component B do we need?

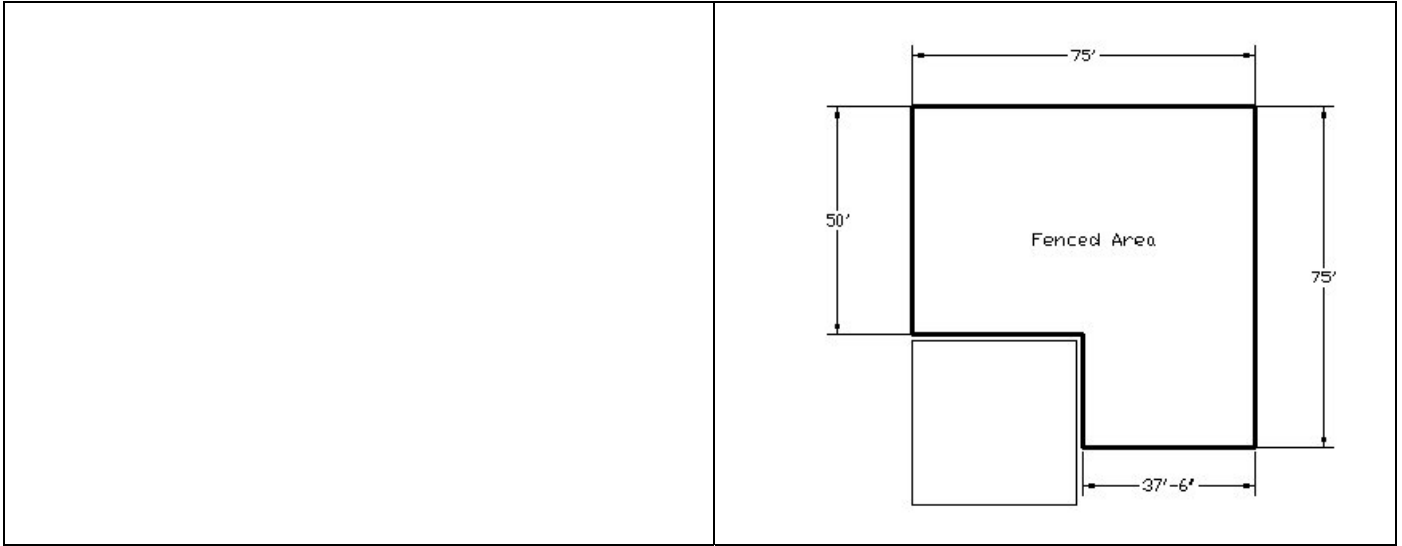
2. There is a container holding 11 cups. How many teaspoons can we get from the container? There are 16 tablespoons in a cup and 3 teaspoons in a tablespoon. Show your work using the Unit – Factor (bracket) method.

3. Measure the line in inches and centimeters using a scale. Convert inches to centimeters to show that your answer is correct.

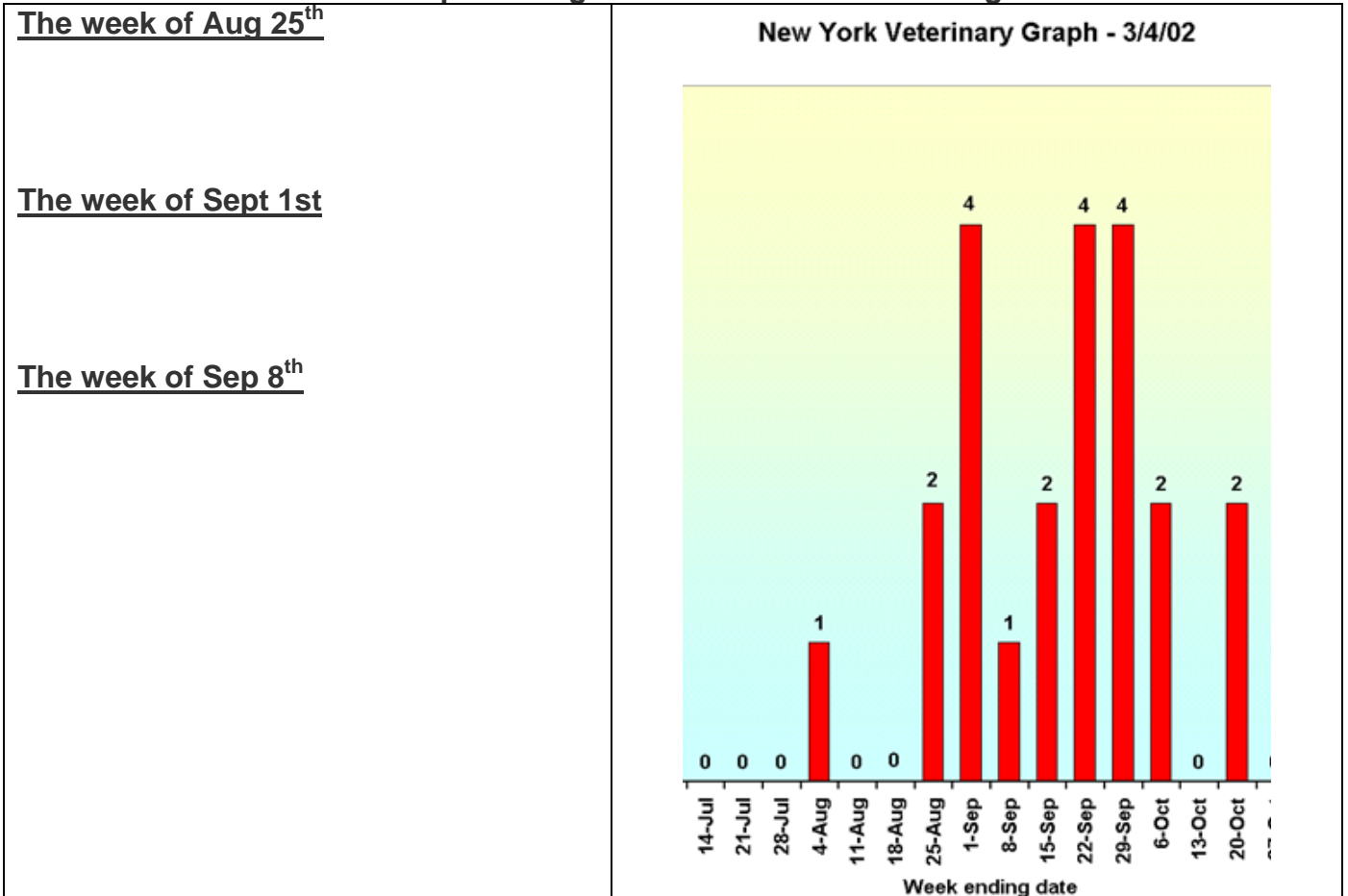


Use $2.54 \text{ cm} = 1 \text{ inch}$ to check your measurement.

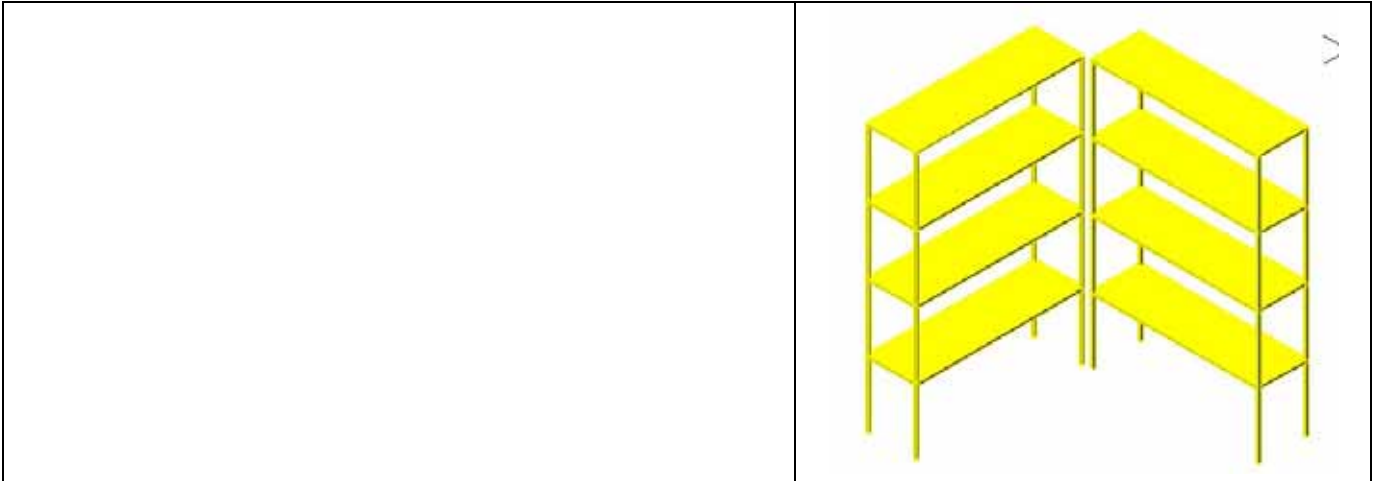
4. Compute the area in square feet and the perimeter in feet of the fenced area below. Our old exercise area was 3000 square feet. What is the percent increase in the exercise area?



5. Reading the graph, what is the total number of West Nile Virus infections for animals in New York? What is the percentage of the total is the following?



6. If the total area of eight equally sized shelves in the storage room is 60 square feet, and the width of the shelves is 18 inches, what is the length of each shelf? The formula for area is $A = L \times W$



7. Our fish tank guide says we should put two gallons of water in the tank for every inch of the fish. The four fish we own measure $3 \frac{1}{2}$ inches, $4 \frac{1}{4}$ inches, $5 \frac{3}{4}$ inches and $6 \frac{1}{2}$ inches. How many gallons do we need?

Blank space for the student to show their work for question 7.

8. There is a container holding 14 fluid ounces of solvent. We use two and a half tablespoons each day. How many days before we run out of solvent? Show your work using the Unit – Factor (bracket) method.

Blank space for the student to show their work for question 8.

9. The Humane Society of the United States estimates thirty nine percent of homeowners have at least one dog. If there are 112,000,000 homeowners in the U.S., how many homes have dogs? If 34% of homeowners have at least one cat, what is the number of households with a cat?

10. Experts recommend an area of at least 720 sq. inches for a rabbit's cage. If the cage bottom measures 100cm by 60cm, does the cage meet the expert's requirements? (1 inch = 2.54 cm)

11. In 2001, there was an estimated 4.8 million rabbits being raised in 2.7 million households in the United States. What is the number of rabbits per household? If there are 112,000,000 households in the United States, what is the percent of households that own a rabbit?