

Name _____

Circle all answers

1. The *furlong*, an abbreviation for "furrow-long", was decided to be 40 rods. The race track for the Kentucky Derby is 10 furlongs in length. How many miles does a horse travel in winning the Kentucky Derby ?

Linear Measure
12 inches = 1 foot
3 feet = 1 yard
5 1/2 yards = 1 rod
320 rods = 1 mile

2. Using the Apothecaries' weights, perform the following operations

a)

$$\begin{array}{r}
 15 \text{ oz. } 3 \text{ dr. } 1 \text{ gr.} \\
 + 12 \text{ oz. } 3 \text{ dr. } 2 \text{ sc. } 17 \text{ gr.} \\
 \text{sc.} \\
 \hline
 7 \text{ oz. } 2 \text{ dr. } 2 \text{ sc. } 12 \text{ gr.}
 \end{array}$$

b)

$$\begin{array}{r}
 9 \text{ lb.} \\
 - 8 \text{ lb. } 2 \text{ oz. } 2
 \end{array}$$

Apothecaries' Weight
20 grains = 1 scruple
3 scruples = 1 dram
8 drams = 1 ounce
12 ounces = 1 pound

c)

$$\begin{array}{r}
 12 \text{ oz. } 3 \text{ dr. } 2 \text{ sc. } 17 \text{ gr.} \\
 \hline
 \times 10
 \end{array}$$

Paper Measure
24 sheets = 1 quire
20 quires = 1 ream
2 reams = 1 bundle
5 bundles = 1 bale

3. In paper measure, how many sheets of $8\frac{1}{2} \times 11$ inch paper are there in one ream ?

4. a) Which is larger 3.45 m or 345 dm **and** by how much ?

- b) Divide 4 m 3 dm 7 cm into 3 equal lengths. What would be the length of each **and** how much would remain after the division?

5. In *System Internationale* (SI) units, the *pascal* (Pa) is the derived unit of pressure. The metric system is a subset of SI and SI is a decimal system. How many cPa are equivalent to 30 kPa?

6. The *international nautical mile* is based on the circumference of the Earth. If you were to cut the Earth in half at the equator, you could pick up one of the halves and look at the equator as a circle. You could divide that circle into 360 degrees. You could then divide a degree into 60 minutes. A minute of arc on the planet Earth is 1 nautical mile. This unit of measurement is used by all nations for air and sea travel. If the circumference of the Earth is 24,857 miles and there are 5280 ft. in a common mile, how many feet are in a nautical mile?

7. The *euro* (€) is available in seven different bills and eight separate coins. Today's currency rate is set at $1 \text{ €} = \$1.316 \text{ (US)}$. How many U.S. dollars could be exchanged for 500 € ?
8. You have available 53 gal. 1 qt. 1 pt. of punch for a family picnic. Your punch bowl has a capacity of 4 gal. 2 qt. 1 pt. . How many times will you be able to fill this bowl **and** how much punch will be left?
9. If one gallon of water weighs $8\frac{1}{3}$ lb, and if one cubic foot will hold $7\frac{1}{2}$ gallons, how much would one cubic foot of water weigh?
10. The metric system is truly a cohesive system of measures. By understanding the nature of this system we can solve the following - What is the capacity, in liters, of a container of water weighing 200 dg ?
11. Which is larger?
- a) 1 mile or 1 kilometer
- b) 1 quart or 1 liter