

8th Grade Varsity Practice Problems

1. A rectangular track has sides with a length of 150 meters. If the width of the track is 60 meters shorter, how far is 1.5 laps around the track?
2. What is the least common multiple of 20, 30, 40, 50 and 60?
3. If a rope 36 inches long fits exactly once around a circle, what is the radius of the circle?
4. Five cars (each of the same length) plus eight trucks (each of the same length) take up the same room in a warehouse as 11 of those same trucks. How many cars can fit into a warehouse which can hold 30 trucks?
5. If 1 American dollar = 80 European cents, how many American cents is one European dollar worth?
6. 15^4 can also be expressed as the product $(3^x)(5^y)$. Find the values of x and y .
7. A dollar bill is 0.0043 inches thick. How many yards high is a pile of 10^6 dollar bills (round to the nearest tenth)?
8. The length of an arc of a circle equals $1/8$ of the circle's circumference. What is the diameter of the circle if the length of the arc is π ?
9. A cylindrical water tank on top of a building has an 8 foot radius and a height of 15 feet. The tank has a large, empty, rectangular swimming pool next to it, 30 feet long and 20 feet wide. If the entire tank is emptied into a swimming pool, how high will the water level be in the swimming pool? (Round your answer to the nearest tenth.)
10. How many *different* ways are there to arrange the letters A, A, B, C? (For example, AABC, AACB, etc.)

8th Grade Varsity Practice Problems Answer Key

1. 720 meters
2. 600
3. $18/\pi$ inches or 5.73 inches
4. 50 cars
5. 125 American cents
6. $x = 4, y = 4$
7. 119.4 yards
8. 4
9. 5.0 feet
10. 12 ways