

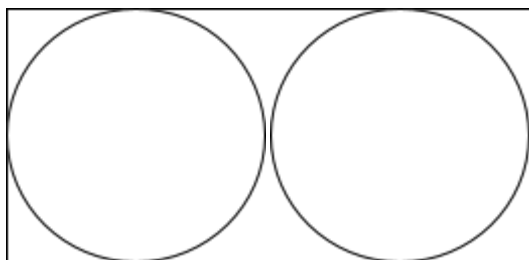
8th Grade Practice Problems (Easy to Challenging)

1. $1992 - 1000 = 1000 - ?$
2. If June 1, 2009 is a Friday, then what day of the week is July 1, 2009?
3. If *twice* the perimeter of a square is 28, then what is the length of a side of the square?
4. The points A, B, C, D, and E are located on a straight line in order.
 - The distance from A to E is 20cm.
 - The distance from A to D is 15cm.
 - The distance from B to E is 10cm.
 - C is halfway between B and D.

What is the distance from B to C?

5. If it takes 6 specks to make a spot, how many specks does it take to make $5\frac{2}{3}$ spots?
6. The Adams family was going to buy a car for \$5800. The car dealer offered the Adams family two options for buying the car. They could pay the full amount in cash, or they could pay \$1000.00 down and \$230.00 a month for 24 months on the installment plan. How much more would they pay for the car on the installment plan?
7. George, Sam, Andrew and Brandon each had four dates to four different Parish Center Dances with four different girls, named Cher, Connie, Melissa and Kendra. On the second date, George dated Connie and Brandon dated Kendra. On the third date Andrew went out with Melissa and Sam went out with Connie. Melissa went out with George and Cher went out with Sam on the fourth date. What couples went out together on the first date if no pairs went out more than once?

8. The sum of the areas of the two congruent circles shown is 72π centimeters. What is the area of the rectangle?



9. A rocket ship flies at 36,000 km/hr. If I fly 120 km in this rocket ship, for how many seconds do I fly?

10. When I turn my calculator upside down, the digits 0, 1, 2, 5, 6, 8, 9 still appear as digits. For example, when I turn my calculator upside down, 65259 remain the same—that is, it stays 65259. How many whole numbers between 100 and 1000 remain the same when I turn my calculator upside down?

11. 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?

12. What is the least common multiple of 20, 30, 40, 50 and 60?

13. If a rope 36 inches long fits exactly once around a circle, what is the radius of the circle?

14. 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?

15. If 1 American dollar = 80 European cents, how many American cents is one European dollar worth?

16. 15^4 can also be expressed as the product $(3^x)(5^y)$. Find the values of x and y .

17. 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)?

18. The length of an arc of a circle equals $\frac{1}{8}$ of the circle's circumference. What is the diameter of the circle if the length of the arc is π ?

19. 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.)

20. How many *different* ways are there to arrange the letters A, A, B, C? (For example, AABC, AACB, etc.)

Solutions

1. 8
2. Sunday
3. $3\frac{1}{2}$ or 3.5
4. 2.5 cm
5. 34 specks
6. \$720
7. Cher dated George
Brandon dated Melissa
Connie dated Andrew
Sam dated Kendra
8. 2880 cm^2
9. 12
10. 30
11. 720 meters
12. 600
13. $18/\pi$ inches or 5.73 inches
14. 50 cars
15. 125 American cents
16. $x = 4$, $y = 4$

17. 119.4 yards

18. 4

19. 5.0 feet

20. 12 ways