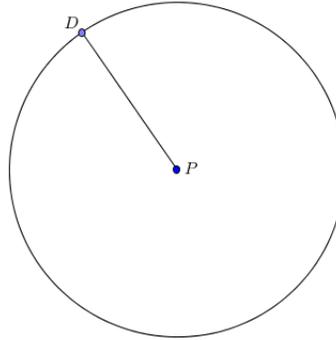


- (2 points)** Mrs. Funk woke up late for school today. School starts at 7:00 A.M, but Mrs. Funk woke up at 7:35 A.M. She always takes 20 minutes to eat breakfast, 35 minutes to get dressed, and 15 minutes to fly to school. By how many minutes was she late to school today?
- (2 points)** What is the least common denominator of $\frac{3}{4}$, $\frac{7}{15}$ and $\frac{1}{12}$?
- (2 points)** Look at Circle P below. If \overline{DP} is 4 units long, what is the value of the circumference of Circle P? (Express your answer in terms of π)



- (2 points)** Let $A = 2 \times 3 - (8 \div 2)$ and Let $B = \frac{7}{3} \times \frac{9}{14} - \frac{4}{5} \times \frac{3}{8}$. Find the value of $A + B$ as a decimal.
- (3 points)** What is the mean + median + mode + range of the following data set?
[4, 2, 3, 1, 0, 4, 4, 7, 9, 6]
- (3 points)** Find the area of each the following quadrilaterals.
 - A = A square with sides 5 in.
 - B = A rectangle with sides 10 in. and 7 in.
 - C = A trapezoid with height 4 in. and bases 3 in. and 6 in.

Find $B - C + A$ in inches squared

- (3 points)** Payal is going to New York City this Christmas! To prepare for the cold weather, she goes to Old Navy and buys 3 sweaters, 1 hoodie, and 1 large coat. Without tax, each sweater costs \$10.00, each hoodie costs \$20.00, and each large coat costs \$40.00. Payal must pay a 6% tax on all her purchases. If Payal gives the cashier a \$100 bill, how much change should she receive?
- (3 points)** Evaluate $123456 + 234567 + 333333$.
- (4 points)** Find the 10th term of the following sequence: 0, 3, 8, 15, 24, 35, 48 ...

10. (4 points) Amy just learned how to use Roman numerals! Excited, she decides to write all her dates in Roman numerals. Below are a few of the dates she wrote.

November 5th 2011 - > XI V MMXI
July 23rd 1994 - > VII XXIII MCMXCIV
December 25th 2002 - > XII XXV MMII

Amy needs help converting one more date. Help Amy by writing April 14th 1995 in Roman numerals.

11. (4 points) Using the equation $y = 4x - 10$, let

A = The value of y if $x = 3$
 B = The value of x if $y = 10$
 C = The value of x if y is 2 more than x

Find $A + B + C$

12. (4 points) The 45 students of the Rickards Math Club are each coloring a picture of Care Bears. In the picture, each student uses at least one of three colors: Pink, Blue, and Yellow. Of the students, 20 use Yellow, 20 use Pink, and 35 use Blue. Furthermore, 10 use both Pink and Blue, and 10 use both Yellow and Pink, and 15 use both Blue and Yellow. If 5 students use all three colors, how many students use Blue and Yellow only?
13. (5 points) Govind wants to climb a 25 mile pole. During the day Govind climbs up 10 miles, but during the night, he slides down 4 miles. If he starts climbing the pole early Saturday morning, then on what day will he reach the top?
14. (5 points) In algebra, an exclamation point (!) is a factorial sign. A factorial is the product of an integer and all of the positive integers below it. For example $4! = 4 \times 3 \times 2 \times 1$ and $8! = 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$.
Using this information, what is $\frac{10!}{8! \times 2!}$?
15. (5 points) Mihir, Wyndham, and Cornelius decide to buy a few Chocolate and Strawberry Ice Cream Cones from the ice cream man. Each Chocolate Ice Cream Cone costs 57 cents and each Strawberry Ice Cream Cone costs 64 cents. Each of them have two dollars and they decide to combine their money to buy as many Cones as possible. If they received 9 cents in change, and there is no tax, how many Chocolate Ice Cream Cones did they buy?