

1. (2 points) Simplify $12[12 - 9 \div (4 \times 6 - 21) + (32 \div 8) - 1]$

2. (2 points) Let

$$A = 1 + 2 + 3 + 4 + 6$$

$$B = 45 - 6 \times 5$$

$$C = 7 + 14 \div 2 - 11$$

$$D = \frac{30 + 5 - 13}{11}$$

Compute the value of $(B - D + C) \div A$.

3. (2 points) Jenny is reading a book called, "The Jungle". She spends 30 minutes reading 15 pages each day. If it took Jenny 20 days to read the entire book, then how many pages are in the book?

4. (2 points) Siddarth has a passing percentage of 96% on all of his math tests. Assuming he has taken 500 math tests, how many math tests has he passed?

5. (3 points) Find the mean of the mode and median of the following given data set: {11, 3, 12, 5, 11, 22, 12, 3, 16, 5, 3}.

6. (3 points) What is $3 \times 0.25 - 11 \times 0.05$ as a fraction in simplest form?

7. (3 points) If Diego is running at constant rate of 6 miles per hour, then how many minutes will it take for him to run 4 miles?

8. (3 points) Let

$$A = \text{the sum of 134 and 255}$$

$$B = \text{the remainder when 15831 is divided 13}$$

$$C = \text{the product of 12 and 11}$$

$$D = \text{the quotient of 3525 divided by 15}$$

Find $C + (A - D) \div B$.

9. (4 points) Abhinav went clothes shopping. He bought 15 shirts, 12 pairs of jeans, and 5 pairs of shoes. Given that an outfit consists of one shirt, one pair of jeans, and one pair of shoes, how many different outfits can he wear?

10. (4 points) Bubba the bear is waiting by the waterfall to randomly catch colorful salmon for dinner. There are 15 salmon in the water. 6 of the salmon are pink, 2 of them are red, and 7 of them are orange. Let

$$A = \text{the probability that Bubba will catch a red salmon}$$

$$B = \text{the probability that Bubba will catch a pink salmon, if Bubba caught all of the red salmon}$$

$$C = \text{the probability that Bubba will catch an orange salmon, if Bubba caught 3 orange salmon already}$$

Find $\frac{A+B}{C}$.

11. (4 points) Steve, Alex, Mihir and Puneet went trick-or-treating together for Halloween and collected pieces of candy. By the end of the night, Steve had 45 pieces, Alex and Mihir had 56 pieces each and Puneet had 79 pieces. They want to add all of their candy together and split it evenly between them. If they do this, how many pieces will each of them get?
12. (4 points) 300 students went to the San Diego Zoo last week. Some students saw Brian the Giraffe or Awnish the Gorilla. If 107 students saw Awnish the Gorilla, 180 students saw Brian the Giraffe, and 59 students saw both Brian the Giraffe and Awnish the Gorilla, how many students saw neither Brian nor Awnish?
13. (5 points) If there are 365 days in one year, 24 hours in one day and 60 minutes in one hour, then how many hours are in 2.5 years?
14. (5 points) Mihir and Siddarth like going to Chick-fil-A. In 5 hours, Siddarth can eat 200 chicken nuggets and drink 30 milkshakes. In that same amount of time, Mihir can eat 40 french fries and 240 apple pies. How many total items can they eat in 25 hours?
15. (5 points) Let

A = the area of a circle with radius 13, using the approximation $\pi \approx 3$

B = the area of a circle with radius 5, using the approximation $\pi \approx 3$

Compute $A - B$.