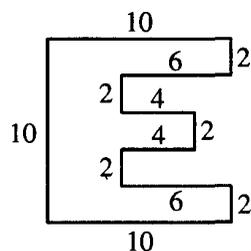


1. Simplify: $3(5) - \frac{4}{6} + \frac{8}{3}$. 1. _____
2. The mean of a list of 10 numbers is 8. If 17 and -1 are added to the list, what is the new mean? 2. _____
3. How many subsets of $\{a, b, c, d, e\}$ have one or fewer elements? 3. _____
4. Find the number of degrees in the measure of the supplement of the complement of an angle with measure 27 degrees. 4. _____
5. Two positive numbers are such that their difference is 6 and the difference of their squares is 48. What is their sum? 5. _____
6. Amy has three Powerful Pink geraniums and three Roaring Red geraniums. If she plants two flowers in each of three pots, how many distinct 3-pot arrangements could she make? 6. _____
7. Set A has seven members. Set B has six members. The union of set A and set B has 10 members. How many elements are there in the intersection of the two sets? 7. _____
8. At West Junior High School sixty of eighty teachers are female. What percent of the teachers are male? 8. _____
9. Perry wants to order deli sandwiches for a party of 30 people. If a jumbo sandwich costs \$15.99 and feeds 10 people, what is his total cost for the sandwiches? 9. _____
10. Two searchlights on a hill are switched on at 5:00 PM. The first makes one revolution every 32 seconds while the second makes one revolution every 56 seconds. How many seconds will have elapsed before each of the two lights is simultaneously shining in its original direction? 10. _____
11. How many square units are in the area of the enclosed region in the diagram? All angles pictured are right angles. 11. _____



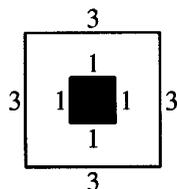
12. In her first 20 free-throw attempts, Elissa sunk 9 baskets. How many baskets must she sink in her next 30 attempts to improve her overall average to 70% ? 12. _____

13. A worker earns \$6.00 per hour for the first 40 hours worked in a week and one and one-half times this amount per hour for any work over 40 hours. A 48-hour week would result in what wages? 13. _____

14. What is the sum of the median and mean of all natural number divisors of 16 ? Express your answer as a mixed number. 14. _____

15. Wally buys a baseball card for \$5.00, sells it for \$6.00, buys the same card back for \$7.00 the following day, and then resells it for \$8.00. How much total profit did Wally make in all of these transactions combined? 15. _____

16. A grand prize is earned if a dart can be thrown into the center shaded square. Given the dimensions shown and assuming that the dart lands randomly within the large square, what is the probability that the grand prize will be won with the first dart thrown? Express your answer as a common fraction. 16. _____



17. Find the value of $0.2 + 0.08 + 0.004$? Express your answer as a decimal. 17. _____

18. How many terms does the following arithmetic sequence have?
 $5.7, 6.7, 7.7, \dots, 21.7$ 18. _____

19. Find a positive integer that is 1.5 more than its reciprocal. 19. _____

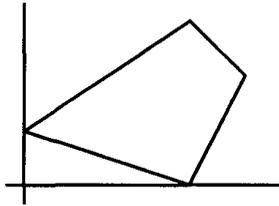
20. If $\boxed{a \ b} = ab - a - b$, then what is $\boxed{5 \ 3}$? 20. _____

21. Express the value of $\frac{2}{\frac{1}{2} + \frac{1}{3}}$ as a mixed number.

21. _____

22. The quadrilateral shown below has its vertices at the points (0, 1), (3, 4), (4, 3), and (3, 0). How many square units are in its area?

22. _____



23. What is the smallest multiple of 5 the sum of whose digits is 18 ?

23. _____

24. A quadrilateral has vertices at (0, 1), (3, 4), (4, 3), and (3, 0). Its perimeter can be expressed in the form $a\sqrt{2} + b\sqrt{10}$ with a and b integers. What is the sum of a and b ?

24. _____

25. Kim's birthday was 200 days ago. Today is Wednesday. On what day of the week did his birthday fall?

25. _____

26. Movie tickets cost \$6.25 each. Jim has \$15.50 and his sister has \$14.25. In order to be able to take their family of six to the movies, how much more must they save?

26. _____

27. If the point whose coordinates are (-5, 3) is reflected about the line $y = -2$, what are the coordinates of its image?

27. _____

28. How many positive integers belong to the solution set of $|3x - 7| \leq 14$?

28. _____

29. Eighty socks, each colored one of six different colors, have been tossed into a drawer. How many socks must be drawn from the drawer to ensure that at least two socks of the same color have been drawn?

29. _____

30. Simplify and write the result in scientific notation: $\frac{6250}{0.0002}$.

30. _____