

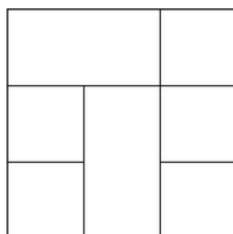
**Answer Sheet for Student Name:** \_\_\_\_\_

#	Answer	Points (0/1)
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Total:

## Problems

1. What is  $5 + 2 \times 3 + 10 / 2$ ?
2. If Bob has 18 apples and Ann has 32 apples, how many apples must Ann give to Bob for them to have the same number of apples?
3. In the cities of Townsville and Clownsville, there are 20 students in each city. If each student in Townsville owns 1 calculator, and each student in Clownsville owns 3 calculators, how many more calculators are there in Clownsville than in Townsville?
4. What is the volume of a cube with sides of length  $2/5$  inches?
5. It takes 28 minutes for Aziz to walk all the way around a nearby lake. What fraction of the walk around the lake does he complete in 16 minutes?
6. How many squares are in the following figure:

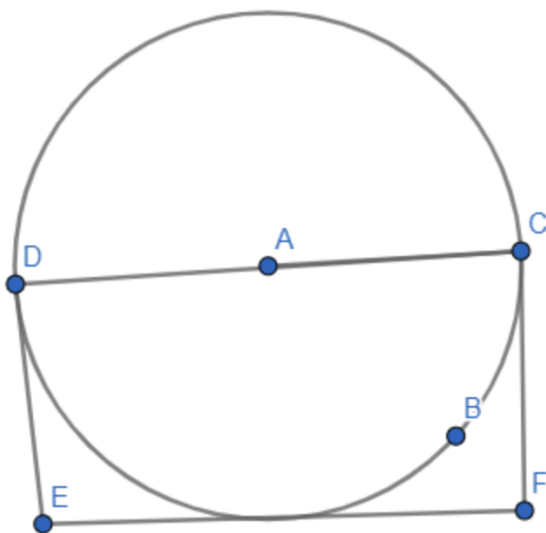


7. Jeff wants to buy a house for \$100. What is the price of the house after a 80% discount and afterwards a 10% tax?
8. A local shop in Seattle sells Ann's Savory Sandwiches™ which cost \$4.00 each before tax. If tax in Seattle is 5%, how many sandwiches can Cam buy if he has 20 quarters and 10 nickels?
9. Adele and Boris decided to pool their supply of fruit leather. Adele had  $2/5$  lb, and Boris had  $2/7$  lb. Noticing that Constantine had none, they decided to give  $1/3$  of their combined pool to him. How much fruit leather did Constantine get?
10. If Ann is running away from Bob at 5 miles per hour and Bob is running towards Ann at 10 miles per hour, and they are currently 20 miles apart, how many hours will it take Bob to catch up to Ann?
11. An antique cabinet takes up 48 cubic feet of space in its owner's bedroom. When all the drawers are pulled all the way open, the depth of the cabinet is doubled, while its width and height remain the same. How much space does it take up then?
12. Bob has 6 shiny socks and 10 non-shiny socks in his drawer. If Bob randomly picks up 2 socks, one by one without replacement, what is the probability that he picks up a shiny sock and a non-shiny sock? Express your answer as a simplified fraction.
13. Cam is trying to find the fifth prime number, but he accidentally counts multiples of 3 instead of prime numbers. What is the sum of the number he got and the actual fifth prime number?
14. A box 6 ft long, 4 ft wide and 3 ft tall contains two blocks, each 2 ft long, 2 ft wide and 3 ft tall. How much storage space is left in the box?
15. The math symbol  $\beta$  when used like  $x\beta y$  means  $x + 2y$ . For example,  $2\beta 1 = 4$ . Solve for x:

$$((x \beta 2) \beta 2) = (2 \beta 1) \beta 4$$

16. What is the area of the pentagon with vertices at: (0,2), (0,4), (3,2), (3,4), and (1.5,6)?

17. SZA has a lot of broken clocks, like the ones in her bedroom and her kitchen. Both of those clocks go faster than a correct clock. She initially calibrates her clocks at 12:00 PM so they both show the right time. However, when it's 12:30 PM, her bedroom clock says it's 12:35 PM while her kitchen clock says it's 12:45 PM. What is the difference in time, in minutes, between the times the two broken clocks show at 7 PM?
18. On Ann's farm, there are a mix of cows and chickens. Some of the chickens are genetically modified and have 2 heads. If there are 56 feet, 36 heads, and 24 animals on the farm, how many genetically modified chickens are there?
19. Bob's Bouncy Ball™ bounces double of the height it falls from. If Bob drops his ball from a starting height of 32 feet in a room with a ceiling height of 80 ft, how many total feet will his ball travel (up and down) before its fifth bounce, counting the initial drop?
20. What is the units digit of  $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$  (4 multiplied together 10 times)?
21. At a spirit day, every student is wearing red, white, and/or black. There are 100 students total. 25 students are wearing red, 32 students are wearing white, 63 students are wearing black, and 10 students are wearing all three colors. How many students are wearing white and black?
22. If today is Tuesday, then what day of the week will it be after 100 days?
23. How many different ways can 180 be expressed as the product of a pair of two factors, the first of which is a prime number?
24. What is the area of the region outside the circle but inside the rectangle, given that DC is a diameter with length 20 and EDCF is a rectangle tangent to circle A by DE, EF, and CF? Express your answer in terms of pi.



25. How many factors of  $5 \times 4 \times 3 \times 2 \times 1$  are even?

**Solutions**

1. 16
2. 7
3. 40
4.  $\frac{8}{125}$
5.  $\frac{4}{7}$
6. 8
7. \$22
8. 1
9.  $8/35$  lb
10. 4
11. 96
12.  $\frac{1}{4}$
13. 26
14. 48
15. 4
16. 9
17. 140
18. 12
19. 400
20. 6
21. 10
22. Thursday
23. 3
24.  $200-50\pi$
25.  $\frac{3}{4}$