

For all questions, answer choice (E) NOTA means that none of the given answers is correct. Every correct question is worth 5 points, every blank question is 1 point, and every wrong question is worth 0 points. Good Luck!

1. Dez and Trish have made a pact to only sell CDs for which last 3 digits of the serial number is divisible by 7. Of the following numbers, which choice does not satisfy that requirement?
(A) 581 (B) 787 (C) 861 (D) 266 (E) 196
2. Ananya is on the highway from Tallahassee to Disney World, where tolls can be paid by solving math problems!

A is $\frac{2}{5}$ C, C is $\frac{1}{3}$ of B, and $\frac{1}{2}$ B is 15

What is the value of A?

- (A) 4 (B) 1 (C) 5 (D) 6 (E) NOTA
3. The people of Avalor conducted a survey, and of the 1896 people surveyed found that 729 people like arepas while 1337 people like mole. How many people like both arepas and mole?
(A) 262 (B) 1288 (C) 170 (D) 134 (E) NOTA
 4. To get around in Orlando Tanmay booked a cab, which charges a flat fee of \$20.65 and an additional \$0.80 per mile. How much money would it cost for a 25 mile drive?
(A) \$20.65 (B) \$40.65 (C) \$21.45 (D) \$45.65 (E) NOTA
 5. After making it to the Genius Junior Finals, "Team Hot Dog" calls Mickey to the stand as their Super Brain to compete in Extreme Number Cruncher. Help him answer this tricky question so he can move to the finals!
$$7(((13 \times 9 - 72)3 + 89) \div 14) + 20222$$

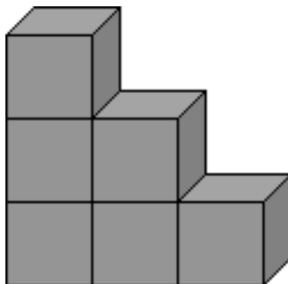
(A) 20110 (B) 610 (C) 20832 (D) 20334 (E) NOTA
 6. What whole number equals $\frac{1}{4}$ of 20% of $\frac{1}{3}$ of 600?
(A) 100 (B) 30 (C) 10 (D) 150 (E) NOTA
 7. Dumbo weighs 2 tons! What is Dumbo's weight in oz, given that 1 ton = 2000 lbs and 1 lb = 16 oz?
(A) 4000 (B) 32000 (C) 32 (D) 64000 (E) NOTA
 8. Tickets to Aladdin Jr. at Fairview Middle are \$6.00 for students and \$4.50 for teachers. If the school made \$2910 in ticket sales and 100 more students bought tickets than teachers, what is the total number of tickets sold to the play?
(A) 320 (B) 540 (C) 600 (D) 450 (E) NOTA
 9. Find the sum of the first ten prime numbers.
(A) 55 (B) 158 (C) 129 (D) 154 (E) NOTA
 10. The Ross' penthouse is located on the 16th floor of their building, where there are 24 stairs between two connecting floors. How many stairs does Bertram have to climb to reach the 16th floor, starting from the first floor?
(A) 360 (B) 384 (C) 408 (D) 420 (E) NOTA

11. Charlie is trying to unlock her sister Teddy's webcam data but must enter a password. Teddy left her a hint that the passcode is the product of the next two terms in the following sequence:

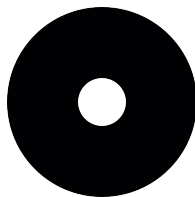
2, 5, 11, 20, 32

What number should Charlie key in?

- (A) 2464 (B) 3055 (C) 33 (D) 112 (E) NOTA
12. Nick and Judy are playing with blocks, and have built stairs that are three cubes tall as shown below. How many more cubes do they need to make a set of stairs that are 8 cubes tall following the same pattern?



- (A) 16 (B) 36 (C) 12 (D) 30 (E) NOTA
13. What is the measure of the larger angle between a clock's hands at 5:00 p.m.?
- (A) 150 (B) 60 (C) 210 (D) 270 (E) NOTA
14. Stranded in the Wandering Oaken's shop, Anna digs through her pockets and pulls out 142 coins: 9 nickels, 28 dimes, 5 quarters, and the rest are pennies. What fraction of the total cost do the quarters make up?
- (A) $\frac{5}{22}$ (B) $\frac{5}{142}$ (C) $\frac{50}{71}$ (D) $\frac{1}{4}$ (E) NOTA
15. Mirabel is a notorious oversleeper and is trying to set an alarm to help wake up on time for family breakfast. It takes her 15 minutes to brush her teeth and shower, 10 minutes to go on a brisk walk, 5 minutes to play around with Casita, and 30 minutes to feed the cows. Given that these are the only things Mirabel does before breakfast, when should she set her alarm for to make it to breakfast exactly at 9:00 A.M.?
- (A) 8:00 P.M. (B) 10:00 A.M. (C) 7:30 A.M. (D) 8:45 A.M. (E) NOTA
16. The werewolves and zombies encounter the wheels shown below, which comprises of two concentric circles, such that there is a whole in the middle of the larger circle. If the radius of the smaller circle is 4 units and the radius of the larger circle is 8 units, what is the area of the wheel itself, in terms of π ?



- (A) 64π (B) 8π (C) 48π (D) 80π (E) NOTA

17. The werewolves of Seabrook's moonstone necklaces are losing their power by $\frac{1}{2}$ everyday. Starting with a full necklace on Monday, on what day would the necklaces' power be $\frac{1}{256}$ of what it was on Monday?
- (A) Monday (B) Tuesday (C) Saturday (D) Thursday (E) NOTA
18. Vanellope Von Schweetz is a lollipop fiend, with a special sweet tooth for purple lollipops. In a sack of lollipops there are 7 pink, 8 purple, 5 green, and 4 red lollipops. If she picks out two lollipops one at a time from the bag without replacement, what is the probability they are both purple?
- (A) $\frac{1}{3}$ (B) $\frac{7}{72}$ (C) $\frac{5}{8}$ (D) $\frac{2}{3}$ (E) NOTA
19. After a failed singing career Gabriella picked up a job at the local diner. A nested stack of 8 cups is 42 in high, while a nested stack of 2 cups is 18 in high (examples for which are shown below). How tall is a stack of 5 cups?



- (A) 30 (B) 45 (C) 24 (D) 48 (E) NOTA
20. Find the volume of a sphere with radius $\frac{3}{\pi}$, in units cubed. ($V = \frac{4}{3}\pi r^3$)
- (A) 36π (B) 27π (C) $\frac{36}{\pi^2}$ (D) $\frac{27}{\pi^3}$ (E) NOTA
21. Before the battle between Auradon and the Isle of the Lost, everyone decided to bump noses with every single other person exactly once. Given that there are 17 people in the battle, how many nose bumps took place?
- (A) 153 (B) 171 (C) 210 (D) 136 (E) NOTA
22. Peter Pan finds himself trapped in the Cartesian Plane, and can only move north, south, east and west. He wanders 20 units north, 16 units east, 8 units south, and 11 units west, until he finally comes across a house made of candy! If he had walked straight from his starting point to the destination, how many units less would he have travelled than the path he took?
- (A) 13 (B) 55 (C) 42 (D) $\sqrt{1513}$ (E) NOTA
23. Troy is trying his hand at baseball for a change, and can make on average 48% of his hits in a day, while Sharpay can make 73% of her hits. If Troy and Sharpay attempt 1876 hits in a day, how many more hits is Sharpay expected to make than Troy?
- (A) 1370 (B) 469 (C) 256 (D) 900 (E) NOTA
24. If one dopey is equal to three bashfuls, four bashfuls are equivalent to seven grumpys, and three grumpys are equivalent to six sneezys, find how many dopeys are equivalent to 42 sneezys.
- (A) 2 (B) 8 (C) 4 (D) 6 (E) NOTA
25. If the perimeter of a rectangle is 60 and the length is four times the width, then what is the area of the rectangle?
- (A) 30 (B) 144 (C) 60 (D) 72 (E) NOTA

26. The following data represent the number of spells gone wrong at the Russo household each month: 43, 37, 35, 30, 41, 23, 33, 31, 16, 21. Calculate the mean number of spells gone wrong over the 10 month period.
- (A) 31 (B) 33 (C) 21 (D) 22 (E) NOTA
27. Scar is on the hunt for Simba, and located at the point (2,3). If Simba is at the point (7,9), what is the slope of the line that passes through both their locations?
- (A) $\frac{6}{5}$ (B) 2 (C) $\frac{5}{6}$ (D) $\frac{1}{2}$ (E) NOTA
28. Cinderella's list of favorite numbers consists only of numbers divisible by 11 (ella-ven). Which one of the following numbers would be on Cinderella's list?
- (A) 111 (B) 1474 (C) 1234 (D) 22222 (E) NOTA
29. Jiminy Cricket was leaning against his umbrella one afternoon, and realized his umbrella when plotted on the Cartesian plane perfectly mapped the line $5x + 7y = 19$. What is the slope of this line?
- (A) $\frac{19}{7}$ (B) $\frac{-5}{19}$ (C) $\frac{-7}{19}$ (D) $\frac{-5}{7}$ (E) NOTA
30. You have reached the end, lets celebrate with some icecream! If there are 8 different types of flavors, 3 types of cones, and 12 types of toppings, how many combinations of icecream can we make? (Assume that one combination only uses one flavor, one type of cone, and one topping)
- (A) 23 (B) 240 (C) 288 (D) 144 (E) NOTA