

For all questions, answer choice (E) NOTA means that none of the given answers is correct. Good Luck!

1. Spiderman can shoot 120 webs in 5 minutes. How many can he shoot in 80 seconds?
(A) 200 (B) 3 (C) 1920 (D) 32 (E) NOTA
2. Wanda wanted to show Vision a magic trick. She claims that she can guess the number in the 75th decimal place when you divide 6 by 13, without having to write out the entire decimal. Given that Wanda answered the question correctly, what number did she guess?
(A) 1 (B) 5 (C) 8 (D) 6 (E) NOTA
3. Gamora was annoyed with Peter Quill's antics so she took away his Walkman headset. She told him that she would only give it back if he correctly solved this riddle:

Nine less than the product of a variable x and 7 is equal to 23 more than 31. What is the value of x ?

(A) 7 (B) $\frac{3}{26}$ (C) $\frac{32}{7}$ (D) 9 (E) NOTA
4. Ultron wanted to steal some machinery from Stark Industries and take them two at a time. Given that there are eight supercomputers, in how many combinations can Ultron kidnap the first pair?
(A) 16 ways (B) 14 ways (C) 56 ways (D) 28 ways (E) NOTA
5. Someone stole 101 nanobots from Tony Stark. The nanobots have found a way to escape, however only a limited number of the bots can leave without arousing any suspicion. Seven of them escape each night, only for three of them to be caught by the thief and returned back to the thief's lair. Once the last nanobot escapes, the thief is unable to capture them and bring them back. In how many days will all of the nanobots escape?
(A) 26 (B) 14 (C) 25 (D) 15 (E) NOTA
6. Pepper Potts needed some money from the bank to buy some jewelry for a gala. She asked a bank teller to cash a \$390 check using \$20 bills and \$50 bills. If the teller gave her a total of 15 bills, how many \$50 bills did she receive?
(A) 5 bills (B) 6 bills (C) 12 bills (D) 3 bills (E) NOTA
7. The Central City Department of Transportation has raised the speed limit for the Quicksilver's travels on the public roads from 100 miles per hour to 120 miles per hour. How much faster is the Quicksilver's commute from his house to Stark Industries, given that the distance between the two places is 600 miles.
(A) 1 hour (B) 5 hours (C) 2 hours (D) 6 hours (E) NOTA

8. After a tragic encounter with radioactive waste, Captain America has fallen ill. His doctors have prescribed him ten yellow sun pills, and he must take one pill every five hours to regain his strength. If Captain America takes his first pill at 5 pm, and he is continuously taking these yellow sun pills throughout the day and night, at what time will he take his last pill?
- (A) 2 P.M. (B) 12 A.M. (C) 9 A.M. (D) 7 P.M. (E) NOTA
9. Tony Stark and Bruce Banner have decided to participate in a read-a-thon. Before the read-a-thon has started, Tony has read 20 pages, and Bruce has read 12 pages. Bruce realizes that Tony is significantly beating him, and although this is not a competition, he decides to up his game. On each following day, Bruce reads 4 pages, while Tony only reads 3 pages. Eventually, there comes a day where both Bruce and Tony would have read the same number of pages. Which day of the read-a-thon does this occur, and what is the number of pages that they read?
- (A) 6th day;57 pages (B) 8th day;44 pages (C) 8th day;57 pages (D) 6th day;44 pages (E) NOTA
10. Shuri and her brother T'Challa leave Wakanda on a train at the same time. The train with Shuri travels north and the train with T'Challa travels south. At the end of two hours they are 180 miles apart. Find the rate of both trains if Shuri is traveling 10 miles per hour slower than T'Challa?
- (A) 40 mph/50 mph (B) 85 mph/95 mph (C) 30 mph/60 mph (D) 60 mph/70 mph (E) NOTA
11. Kamala Khan snuck out one night to go to a party at the Jersey Waterfront. Unfortunately, the party was by password entry only, which in this case was a number. Her friend Zoe, wanting to help her out, presented her with the following: The average of 3 one-digit numbers is a whole number. One number is 2 and the other 2 numbers are equal, and not equal to 2. The passcode is equal to the sum of the three numbers. What number does Kamala need to say to get in?
- (A) 12 (B) 20 (C) 15 (D) 10 (E) NOTA
12. Thanos has an obscene obsession with finding Vision. In order to find him, Thanos sends his children after Vision, which spawn at a rapid rate. The number of children at the end of this repeated spawning can be calculated by the following expression:
- $$9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9$$
- What is the one's digit of the number of children after the spawning?
- (A) 1 (B) 5 (C) 2 (D) 3 (E) NOTA
13. Hulk has a circular face. The diameter of his face is 12 inches. What is the area of his face in terms of π ?
- (A) 36π (B) 144π (C) 12π (D) 24π (E) NOTA
14. Ant-Man has a recipe that calls for $1\frac{1}{2}$ cup of milk for one serving. If he wants to make 24 servings, how many pints of milk does he have to pour in?
- (A) 36 (B) 9 (C) 4.5 (D) 18 (E) NOTA

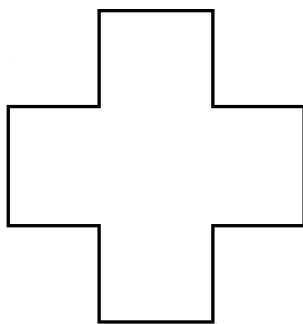
15. Falcon is flying towards the UN. He is going forward at a slowed rate of 14 miles per hour (mph), due to the fact that the wind is blowing towards him. He realized that if the wind was blowing in the direction he was heading, then he would be going forward at a rate of 20 mph. What would be Falcon's speed be if there was no wind?
- (A) 15 mph (B) 34 mph (C) 6 mph (D) 17 mph (E) NOTA
16. Loki was thinking up a diabolical way to get rid of his brother, Thor. He realized a great idea would be an invasion by Dark Elves. Loki was debating between 553 elves or 947 elves. He decides it's too much of a hassle to pick one, so he averages out the two numbers. How many Dark Elves will end up being a part of the invasion?
- (A) 1500 (B) 1490 (C) 750 (D) 1495 (E) NOTA
17. Lord Farquaad was upset with Fiona because she ran away with Shrek as well as with the fact that he was inside Fergie the dragon's stomach. Inside, he did a lot of thinking. He wondered what the area of his two-dimensional hair was. The area of his hair was the equivalent of the area of one square plus two circles of equal radius. If the side length of the square is $2(31)$ inches and the radius of a circle is 5 inches. What is the area of his hair in terms of π ?
- (A) $36 + 50\pi$ (B) $144 + 25\pi$ (C) $144 + 50\pi$ (D) $36 + 25\pi$ (E) NOTA
18. Howard Stark lives on the 10th floor of a building. There are 29 stairs between two connecting floors. How many stairs does Stark need to climb to reach the 10th floor, starting from the first floor (ground floor)?
- (A) 203 (B) 290 (C) 232 (D) 261 (E) NOTA
19. Black Widow is confused because Hawkeye presented her with a very complex problem. The question was, "There is a square with a side length of 2 units. This square is then inscribed in a circle. The circle which is rotated about the square stated above 2 then has a hexagon on top of it. The hexagon has a length of 16 units. This hexagon is then cut into six separate equilateral triangles with a side length of 16 units as well. " What is the perimeter of the square?
- (A) 59 units (B) 8 units (C) 64 units (D) 28 units (E) NOTA
20. Thor encountered a very mathematical spirit. It pestered him constantly asking, "What is the first prime number times the second prime number times the fifth prime number?" Without a correct answer, Thor couldn't focus at all with the pestering. Finally, he couldn't take it anymore and found a local mathematician to provide him with the answer. What would the mathematician say the answer is?
- (A) 25 (B) 52 (C) 84 (D) 66 (E) NOTA
21. Last night, Happy received his new computer, and he was ecstatic. He was so excited that he opened a word document and started typing "MARVEL" again and again without spaces until his computer crashed from all the activity. In this long chunk of characters, what was the 905th key on the keyboard that Happy hit?
- (A) R (B) E (C) A (D) L (E) NOTA

22. The Guardians of the Galaxy's database is hacked during an online battle against Ronan the Accuser. They are presented with this expression:

$$7yx2x^2(y^3)^2$$

and must simplify it to prevent Ronan the Accuser. from breaching the Benatar mainframe. Unfortunately, while the Guardians consist of some of the most skilled individuals, they all are terrible at math, and are struggling to come up with an answer. Help the Guardians by simplifying this expression, so that they do not lose to Ronan.

- (A) $18x^5y^{11}$ (B) $14x^5y^{12}$ (C) $14x^3 + 3y^3$ (D) $14x^3y^7$ (E) NOTA
23. Hawkeye has an oddly shaped ninja star which is pictured below (not to scale). Shuri crafted this by cutting out 4x4 shaped squares from the corners of a 13x13 square shaped piece of metal. What is the total area of the ninja star, in units?



- (A) 153 (B) 105 (C) 22 (D) 137 (E) NOTA
24. Captain America has scheduled a meeting for the 182th day of the 2024 calendar year at 3 P.M. (What an annoying way to express a date!) Thor, unfamiliar with Earthly expressions of calendar time, is unable to calculate what specific day the meeting will actually be held on, and needs your help. Help Thor figure out what month Captain America's meeting will be.
- (A) July (B) June (C) May (D) August (E) NOTA
25. In the middle of his battle with the Chitauri, Ironman notices a shawarma place and is dying to try it. If the shawarma is in a perfect cylindrical shape, with a radius of 2 in and a height of $\frac{2}{3}$ ft, what is the volume of the shawarma?
- (A) $32\pi \text{ in}^2$ (B) $8\pi/3 \text{ in}^3$ (C) $32\pi \text{ in}^3$ (D) $8\pi/3 \text{ in}^2$ (E) NOTA
26. Deadpool's head is shaped like a perfect circle. The radius of his head is equal to the area of the triangle with a base length of 4 and a height of 6. Find the area of the surface of Deadpool's head. (NOTE: Assume that Deadpool's head is 2-dimensional)
- (A) 24π (B) 144π (C) 288π (D) 100π (E) NOTA

27. S.H.I.E.L.D. keeps track of the number of villains the Avengers have battled each month of the year and decided to display that data using a stem and leaf plot.

STEM	LEAF
0	5 9 9
1	4 5 5 7
2	6 7
8	0 4 6

Calculate the positive difference between the range and the median of the data set.

- (A) 64 (B) 29 (C) 81 (D) 65 (E) NOTA
28. On the Planet Vormir, Hawkeye and Black Widow had to solve a riddle to pass the Red Skull. The riddle is:

$$\text{"If } \frac{x}{y} = \frac{2}{7} \text{ and } \frac{x}{z} = \frac{3}{4}, \text{ then what is } \frac{y}{z} \text{"}$$

What should they answer in order to get the riddle correct?

- (A) 150 (B) $\frac{21}{8}$ (C) $\frac{5}{11}$ (D) $\frac{7}{6}$ (E) NOTA
29. Super Hero High offers two universe language classes: Asgardian and Centaurian. In a class of 70 students, 25 are taking only Centaurian, 6 are taking both Asgardian and Centaurian, and 5 are not taking either language. How many students, in total, are taking Asgardian?
- (A) 26 (B) 34 (C) 40 (D) 25 (E) NOTA
30. Tony is building a playpen for Morgan and drew out a blueprint on a Cartesian plane to determine how much fencing he needs to go around the pen. Given that his playpen is polygon ABCDEFGH, determine the total length of fencing needed to fully surround the pen, in units.

A (-10,9)	E (2,-2)
B (-6,9)	F (-5,-2)
C (-6,3)	G (-5,-8)
D (2,3)	H (-10,-8)

- (A) 114 (B) 58 (C) 56 (D) 41 (E) NOTA