**Answers:**

1. **D**
2. **B**
3. **B**
4. **D**
5. **A**
6. **D**
7. **B**
8. **E**
9. **C**
10. **C**
11. **B**
12. **D**
13. **A**
14. **C**
15. **E**
16. **B**
17. **E**
18. **E**
19. **D**
20. **C**
21. **B**
22. **B**
23. **B**
24. **B**
25. **C**
26. **B**
27. **C**
28. **B**
29. **D**
30. **B**

**Solutions:**

1. Since there are 14 days in two weeks, 14 x 2 = **28 D**

2. Using order of operations:

(9 x 2 - 12) + → (18 - 12) + → (6) + → (6) + 3 → **9 B**

3. The formula for the area of a triangle is ½ b x h. There are 12 inches in one foot.

½ x 6 x 12 = **36 C**

4. Formula for the perimeter of a circle is 2r.

Circle: 2 x 3.14 x 1 = 6.28 Square: 2 x 4 = 8 Rhombus: 2 x 4 = 8 Pentagon: 2 x 5 = 10

Triangle: 2 x 3 = 6 6.28 + 8 + 8 + 10 + 6 = **38.28 D**

5. Jack got 5 beans so $5 x 5 = $25

He could have sold Milky White at the market for $101

$101 - $25 = **$76 A**

6. The fifth two digit prime number is 23 and fifth three digit prime number is 113.

113 X 23 =**2599 D**

7. 113 + 23 = **136 B**

8. 83MPH - 67MPH = **16MPH E**

9. + + + + + + + + +

Ignoring the denominator first and using the formula:

((1 + 10) x 10 )/2 = 55 **55/4 C**

10. 641 X 0.25 + 1234 X 0.05 + 5269 X 0.01 = 160.25 + 61.7 + 52.69 = 274.64

**He cannot afford to go. C**

11. There is a total of 28 Justins, Jasons, Jaewons, Jamies, Joannas, Julias, and Jessicas. There are 6 Jasons so the probablity of randomly picking a Jason is → **B**

12. The height of the cylinder is : X =

Because Jack is only halfway up the beanstalk, divide by 2. **m D**

13. We see that a right triangle can be formed. Using pythagorean theorem: , we can find the distance between Jack and the maiden. so c = **5 A**

14.100 cm = 1 m, so 1000000 cm3 = 1 m3. 1011 m3 = 1011000000 cm3  **C**

15 \*1 = , == 161. = 2. 161 + 2 = 163. The Giant’s wife weighs 163 890 lbs. **145070 lbs E**

16. Since the side of the equilateral triangle is 1000 km., the sides of the square is also 1000 km.. Area of the square is 1000 x 1000 = **1,000,000 km² B**

17. Whenever Jack goes 6 feet forward, he is pushed back 2 feet. This is a net gain of 4 feet.

= 43. However, if he goes to 168 feet, he will make it to the exit before he is pushed back (168 + 6 is more than 172). So, he is only pushed back 42 times. There are 24 inches in 2 feet. 24 x 42 = **1008 inches E**

18. There are six people in total. = 12 bags of gold for each person initially. However, because Jack took 2 bags of gold from everyone, so Jamie has **10 bags of gold** left. **E**

19. The total volume of the cake is 20 x 20 x 20 = 8000 ft³. Since it takes 3 minutes for Cayle to eat 2 ft³, = 4000 pieces of cake. It takes 34000 = 12000 minutes, which is 1200060= 200 hours for her to finish the cake. **200 D**

20. The quotient of two number is 9: = 9 -----> x = 9y

Their sum is 330: x + y = 330 -----> x + y = 330

Substitute 9y into the second equation: 9y + y + 330 -----> 10y = 330 -----> y = 33

To find x: x = 9y = 9 x 33 = 297. 297 x 33 = 9801.

Subtracting the lowest and highest digit, 9 - 0 = **9 C**

21. We see that the amount of gold Jack drops each minute forms an arithmetic sequence:

1, 3, 5,... To find how much gold is dropped on the 11th minute, add 2 times (11 - 1) to the first term(1). 1+(2 x 10) = **21 B**

22. 78 + [(785+23)+3 x9²] x 0

Using order of operations, we realize that [(785+23)+3 x9²] is multiplied by zero so we are left with **78 B**

23. 12 voted for both Arya and Sarah, 32 - 12 voted for Arya, and 36 - 12 voted for Sarah. You must not forget that Arya and Sarah were at the party but did not vote.

12 + 20 + 24 + 2 = **58 B**

24. The number of minute from 11:43 p.m. to 12:00 a.m. is 17. Then, there are 3 whole hours from 12:00 a.m. to 3:00 a.m. Finally, there are 21 minutes from 3:00 a.m. to 3:21 a.m. There are 180 minutes in 3 hours so the total number of minutes is 180 + 17 + 21 = 218. The total number of seconds is **13080 B**

25. In order for a number to be divisible by 8, it obviously must be even. B and C are eliminated. To see if the number is divisible by 8, you can look at the last 3 digits and see if it is divisible by 8. For answer choice A, the last 3 digits are 102, which is not divisible by 8. That leaves answer choice C. The last three digits is 456, which is divisible by 8 (this question can also be done by dividing the whole number, but it is much longer that way) **C**

26. (1 x 5) + (2 x 7) + (3 x 2) = **25 B**

27. Using the pythagorean theorem, we see that where c is the length of the beanstalk. Therefore, c = **5000 C**

28. - = -706320 = -7063 x 120 = -7632 = -192 = - **B**

29. Since Force = Mass x Acceleration, Force = 1610 x 10 = **16,100 D**

30. “Jack and the Beanstalk is an English fairy tale. The earliest known surviving appearance in print is Benjamin Tabart's moralized version of **1807**.” **B**

source: wikipedia