SAT Math Vocabulary Quiz

1. Which of the following is true?

(A) Zero is not even and not positive.
(B) Zero is even and positive.
(C) Zero is neither odd nor even.
(D) Zero is even and not positive.
(E) Zero is a small, edible fruit.

2. What is the sum of the four times the largest negative integer and the smallest positive integer?

(A) -3
(B) -2
(C) -1
(D) 0
(E) 1

3. How many even integers are between $-20/3$ and $37/5$?

(A) 6
(B) 7
(C) 8
(D) 9
(E) 10

4. Which of the following is true about the number $0.66\overline{66}$?

(A) It is a rational number.
(B) It is an irrational number.
(C) It is correctly gridded as ".66".
(D) It is equivalent to 67/100.
(E) It was a little devil last night.

5. When 30 is divided by 7, the remainder is which of the following?

(A) 0
(B) 0.285714
(C) 2
(D) 2.285714
(E) 4.285714

6. What is the sum of the least prime number and the greatest negative even integer?

(A) -1
(B) 0
(C) 1
(D) 2
(E) 3

7. What number do you get when you multiply the *distinct* (different) prime factors of 28?

(A) 2
(B) 4
(C) 7
(D) 14
(E) 28

10, 9, 15, 27, 14

8. The number 15 is to be added to the list above. Which of the following must be true about the median of the list?

(A) It will decrease from 15 to 14.
(B) It will not change.
(C) It will increase from 14 to 15.
(D) It is tired and wants a Twinkie.
(E) It will increase from 14 to 14.5.

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Answers

1. D

Zero is an even integer, since it can be divided by two without any remainder. Also, zero is neither positive nor negative: it is the integer that divides the number line into negative on the left and positive on the right. And everyone knows that zero is a vegetable, not a fruit.

2. A

The largest negative integer is -1, and the smallest positive integer is 1, so the sum is $4(-1) + 1 = -4 + 1 = -3$.

3. B

Since $-20/3 = -6\frac{2}{3}$ and $37/5 = 7\frac{2}{5}$, the even integers that we need to count are -6, -4, -2, 0, 2, 4, and 6, so the answer is 7. It may be helpful to visualize or write down the number line for this question.

4. A

Since $0.66\overline{66} = 2/3$, and any fraction with integers on the top and bottom is a rational number, answer A is correct. Why are the other answers incorrect? The number $2/3$ can be correctly gridded as ".666" or ".667" or "2/3" but *not* as "0.66". Also, $67/100 = 0.67$ is not the same as $0.66\overline{66}$. Finally, $0.66\overline{66}$ isn't a little devil *every* night of the week, so we can't be sure about last night.

5. C

The remainder is the *integer* amount left over after a number is divided by another. The number 7 goes into 30 four times, with 2 left over, i.e., $7 \times 4 + 2 = 30$, so the remainder is 2.

6. B

The least prime number is 2, and the greatest negative even integer is -2, so the answer is 0.

7. D

To determine the prime factors of 28, either use a factor tree, or list all the factors of 28 and pick out the factors that are prime. Only 2 and 7 are prime, so the answer is $2 \times 7 = 14$. Note that if you use a factor tree, you will find that the prime factors of 28 are 2, 2, and 7. However, the question wants the *distinct* prime factors, which are just 2 and 7.

8. E

To determine the median of a list, we first sort the list in numerical order, and then take the number in the middle. The original sorted list is 9, 10, 14, 15, and 27, so the median is originally 14. If we add the number 15 to the list, the new sorted list is 9, 10, 14, 15, 15, and 27. The median of the new list is now $(14 + 15)/2 = 14.5$ (remember when there is no number in the middle, you take the average of the two numbers on either side of the middle). So, the median has increased from 14 to 14.5. The median could be tired and may want a Twinkie as well, but since we can't be sure, answer E is the correct one.