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Are x and y both positive?

(1) $2x - 2y = 1$

(2) $\frac{x}{y} > 1$

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
- D EACH statement ALONE is sufficient.
- E Statements (1) and (2) TOGETHER are NOT sufficient.

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Each of the 25 balls in a certain box is either red, blue, or white and has a number from 1 to 10 painted on it. If one ball is to be selected at random from the box, what is the probability that the ball selected will either be white or have an even number painted on it?

- (1) The probability that the ball will both be white and have an even number painted on it is 0.
- (2) The probability that the ball will be white minus the probability that the ball will have an even number painted on it is 0.2.

- A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.
- B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.
- C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
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For every positive even integer n , the function $h(n)$ is defined to be the product of all the even integers from 2 to n , inclusive. If p is the smallest prime factor of $h(100) + 1$, then p is

- A between 2 and 10
- B between 10 and 20
- C between 20 and 30
- D between 30 and 40
- E greater than 40

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Last month 15 homes were sold in Town X. The average (arithmetic mean) sale price of the homes was \$150,000 and the median sale price was \$130,000. Which of the following statements must be true?

- I. At least one of the homes was sold for more than \$165,000.
- II. At least one of the homes was sold for more than \$130,000 and less than \$150,000.
- III. At least one of the homes was sold for less than \$130,000.

- A I only
- B II only
- C III only
- D I and II
- E I and III

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Alice's take-home pay last year was the same each month, and she saved the same fraction of her take-home pay each month. The total amount of money that she had saved at the end of the year was 3 times the amount of that portion of her monthly take-home pay that she did not save. If all the money that she saved last year was from her take-home pay, what fraction of her take-home pay did she save each month?

- A $\frac{1}{2}$
- B $\frac{1}{3}$
- C $\frac{1}{4}$
- D $\frac{1}{5}$
- E $\frac{1}{6}$

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The residents of Town X participated in a survey to determine the number of hours per week each resident spent watching television. The distribution of the results of the survey had a mean of 21 hours and a standard deviation of 6 hours. The number of hours that Pat, a resident of Town X, watched television last week was between 1 and 2 standard deviations below the mean. Which of the following could be the number of hours that Pat watched television last week?

- A 30
- B 20
- C 18
- D 12
- E 6

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