CHECKPOINT CHALLENGE: PRACTICE PACING

Question 1

The table below gives the exact probability of randomly drawing a card of a particular color from a deck of solid-colored cards.

Card Color	Probability
Blue	0.2
Green	0.1
Orange	0.1
Purple	0.2
Yellow	0.4

What is the probability of randomly drawing a card that is NOT blue and is NOT yellow?

(A) 0.4

(B) 0.48

(C) 0.6

(D) 0.72

(E) 0.8

Question 2

For what value of k does the quadratic equation $x^2 - x + k = 0$ have solutions of $x = -3$ and $x = 4$?

(F) −12

(G) −1

(H) 1

(J) 7

(K) 12

Question 3

Given the function g defined as $g(x) = 6 - 2x$ has domain $\{-2, 0, 1\}$, what is the range of g?

(A) $\{-8, 0, 4\}$

(B) $\{-2, 4, 10\}$

(C) $\{2, 6, 8\}$

(D) $\{4, 6, 8\}$

(E) $\{4, 6, 10\}$

Question 4

Data Set A consists of 6 numbers listed below. Data Set B consists of the 6 numbers in Data Set A and a 7th number, which is less than 40. How will the mean and the median of Data Set B compare to the median and mean of Data Set A?

$$32, 39, 48, 50, 50, 61$$

(A) The median and mean of Data Set B will be less than the median and mean of Data Set A.

(B) The median of Data Set B will be less than the median of Data Set A and the mean will be the same for both sets.

(C) The median and mean of Data Set B will be the same as the median and mean of Data Set A.

(D) The mean will be the same for both sets and median of Data Set B will be greater than the median of Data Set A.

(E) The median and mean of Data Set B will be greater than the median and mean of Data Set A.

Question 5

In the figure below, K is on $\overline{AB}$, and the measures of $\angle JKL$ and $\angle JKB$ are 90° and 110°, respectively. If it can be determined, what is the measure of $\angle AKL$?
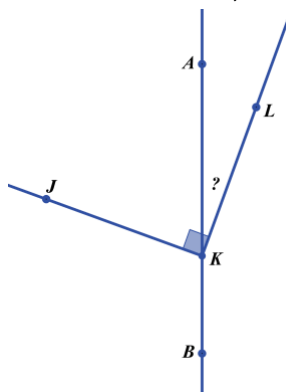
(F) 10°

(G) 20°

(H) 30°

(J) 40°

(K) Cannot be determined from the given information

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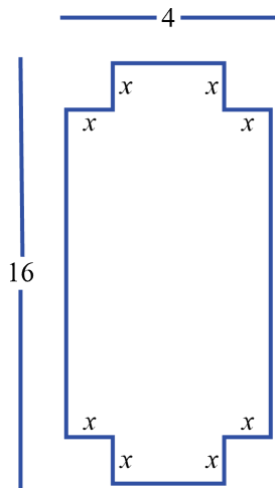
Question 6

The statement $2(x+7)-x=10-(x-14)$ is true for which of the following?

- (F) $x=0$ only
- (G) $x=5$ only
- (H) $x=10$ only
- (J) no values of x
- (K) all values of x

Question 7

Squares with sides of length x in. have been removed from each corner of a rectangle measuring 4 in. by 16 in., resulting in the figure shown below. In terms of x, what is the area, in square inches, of the figure?

- (A) $40-4x^2$
- (B) $64-4x^2$
- (C) $64+4x^2$
- (D) $64-8x$
- (E) $64-40x-4x^2$

Question 8

For all values of a such that $a<-1$, which of the following expressions has the greatest value?

- (F) a
- (G) $2a$
- (H) $a+1$
- (J) $-\dfrac{1}{a}$
- (K) $\dfrac{1}{a}$

Question 9

The solution to the equation $15=7v+20$ is which of the types of numbers listed below?

- I. Positive
- II. Negative
- III. Rational
- IV. Irrational
- V. Integer

- (F) I and III only
- (G) I and IV only
- (H) II and III only
- (J) II and IV only
- (K) I, III, and V only

Question 10

In the figure below, points A, B, C, and D are on the sides of the square $KLMN$. Arc AB has center at L, BC at M, CD at N, and AD at K. All of the arcs have a radius of 5 feet. What is the area, in square feet of the shaded region?
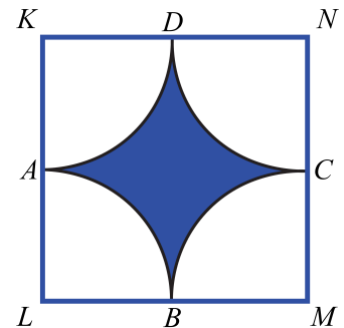
- (A) $40-10\pi$
- (B) $40-25\pi$
- (C) $100-5\pi$
- (D) $100-\dfrac{25}{2}\pi$
- (E) $100-25\pi$