1 / 11

2003 Q16

16. Ali, Bonnie, Carlo and Dianna are going to drive together to a nearby theme park. The car they are using has four seats: one driver's seat, one front passenger seat and two back seats. Bonnie and Carlo are the only two who can drive the car. How many possible seating arrangements are there?

(A) 2 **(B)** 4 **(C)** 6 **(D)** 12 **(E)** 24

2 / 11

2012 Q16

16. Each of the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 is used only once to make two five-digit numbers so that they have the largest possible sum. Which of the following could be one of the numbers?

(A) 76531 **(B)** 86724 **(C)** 87431 **(D)** 96240 **(E)** 97403

3 / 11

2014 Q16

16. The "Middle School Eight" basketball conference has 8 teams. Every season, each team plays every other conference team twice (home and away), and each team also plays 4 games against non-conference opponents. What is the total number of games in a season involving "Middle School Eight" teams?

(A) 60 **(B)** 88 **(C)** 96 **(D)** 144 **(E)** 160

4 / 11

2008 Q17

17. Ms. Osborne asks each student in her class to draw a rectangle with integer side lengths and a perimeter of 50 units. All of her students calculate the area of the rectangle they draw. What is the difference between the largest and smallest possible areas of the rectangles?

(A) 76 **(B)** 120 **(C)** 128 **(D)** 132 **(E)** 136

5 / 11

2004 Q17

17. Three friends have a total of 6 identical pencils, and each one has at least one pencil. In how many ways can this happen?

(A) 1 **(B)** 3 **(C)** 6 **(D)** 10 **(E)** 12

6 / 11

2016 Q18

18. In an All-Area track meet, 216 sprinters enter a 100-meter dash competition. The track has 6 lanes, so only 6 sprinters can compete at a time. At the end of each race the five non-winners are eliminated, and the winner will compete again in a later race. How many races are needed to determine the champion sprinter?

(A) 36 **(B)** 42 **(C)** 43 **(D)** 60 **(E)** 72

7 / 11

2013 Q19

19. Bridget, Cassie, and Hannah are discussing the results of their last math test. Hannah shows Bridget and Cassie her test, but Bridget and Cassie don't show their tests to anyone. Cassie says, "I didn't get the lowest score in our class," and Bridget adds, "I didn't get the highest score." What is the ranking of the three girls from highest to lowest?

(A) Hannah, Cassie, Bridget **(B)** Hannah, Bridget, Cassie

(C) Cassie, Bridget, Hannah **(D)** Cassie, Hannah, Bridget

(E) Bridget, Cassie, Hannah

8 / 11

1990 Q19

19 . There are 120 seats in a row. What is the fewest number of seats that must be occupied so the next person to be seated must sit next to someone?

A) 30 B) 40 C) 41 D) 60 E) 119

9 / 11

1991 Q20

20. In the addition problem, each digit has been replaced by a letter. If different letters represent different digits then $C =$

$$\begin{array}{r} A\ B\ C \\ A\ B \\ +\quad A \\ \hline 3\ 0\ 0 \end{array}$$

(A) 1 **(B)** 3 **(C)** 5 **(D)** 7 **(E)** 9

10 / 11

1994 Q20

20. Let W, X, Y and Z be four different digits selected from the set

$$\{1,2,3,4,5,6,7,8,9\}.$$

If the sum $\frac{W}{X}+\frac{Y}{Z}$ is to be as small as possible, then $\frac{W}{X}+\frac{Y}{Z}$ must equal

(A) $\frac{2}{17}$ **(B)** $\frac{3}{17}$ **(C)** $\frac{17}{72}$ **(D)** $\frac{25}{72}$ **(E)** $\frac{13}{36}$

11 / 11

2006 Q20

20. A singles tournament had six players. Each player played every other player only once, with no ties. If Helen won 4 games, Ines won 3 games, Janet won 2 games, Kendra won 2 games and Lara won 2 games, how many games did Monica win?

(A) 0 **(B)** 1 **(C)** 2 **(D)** 3 **(E)** 4