1995 Q16

16. Students from three middle schools worked on a summer project.
Seven students from Allen School worked for 3 days.
Four students from Balboa School worked for 5 days.
Five students from Carver School worked for 9 days.
The total amount paid for the students' work was \$774. Assuming each student received the same amount for a day's work, how much did the students from Balboa School earn altogether?

(A) \$9.00 **(B)** \$48.38 **(C)** \$180.00 **(D)** \$193.50 **(E)** \$258.00

16. **(C)** Tabulate the data:

Allen School	: 7 students for 3 days	=	21 worker days
Balboa School	: 4 students for 5 days	=	20 worker days
Carver School	: 5 students for 9 days	=	45 worker days
	Total :		86 worker days

Hence, \$774 ÷ 86 = \$9 per worker day. Thus the students from Balboa School earned \$9 per worker day for 20 worker days, for a total of \$180.

1985 Q18

18. Nine copies of a certain pamphlet cost less than \$10.00 while ten copies of the same pamphlet (at the same price) cost more than \$11.00. How much does one copy of this pamphlet cost?

A) \$1.07 B) \$1.08 C) \$1.09 D) \$1.10 E) \$1.11

18. (E) Only (E) satisfies the hypothesis that ten copies of the pamphlet cost more that \$11.00.

OR

If P is the price of the pamphlet, then $9P < 10$ and $10P > 11$ or $1.10 < P < 1.1111...$. Thus P = \$1.11.

1989 Q19

19. The graph below shows the total accumulated dollars (in millions) spent by the Surf City government during 1988. For example, about .5 million had been spent by the beginning of February and approximately 2 million by the end of April. Approximately how many millions of dollars were spent during the summer months of June, July, and August?

A) 1.5 B) 2.5 C) 3.5 D) 4.5 E) 5.5

19. B The graph shows expenditures of a bit more than \$2 million by the beginning of June and a bit more than \$4.5 million by the end of August. Thus about 4.5 – 2.0 = \$2.5 million was spent during the summer months.

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2000 Q20

20. You have nine coins: a collection of pennies, nickels, dimes, and quarters having a total value of \$1.02, with at least one coin of each type. How many dimes must you have?

(A) 1 **(B)** 2 **(C)** 3 **(D)** 4 **(E)** 5

20. **Answer (A):** Since the total value is \$1.02, you must have either 2 or 7 pennies. It is impossible to have 7 pennies, since the two remaining coins cannot have a value of 95 cents. With 2 pennies the remaining 7 coins have a value of \$1.00. Either 2 or 3 of these must be quarters. If you have 2 quarters, the other 5 coins would be dimes, and you would have no nickels. The only possible solution is 3 quarters, 1 dime, 3 nickels and 2 pennies.