Part I

Answer all 24 questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale. For each statement or question, choose the word or expression that, of those given, best completes the statement or answers the question. Record your answers on your separate answer sheet. [48]

Use this space for computations.

1 The solution to $4p + 2 < 2(p + 5)$ is

(1) $p > -6$
(2) $p < -6$
(3) $p > 4$
(4) $p < 4$

2 If $k(x) = 2x^2 - 3\sqrt{x}$, then $k(9)$ is

(1) 315
(2) 307
(3) 159
(4) 153

3 The expression $3(x^2 + 2x - 3) - 4(4x^2 - 7x + 5)$ is equivalent to

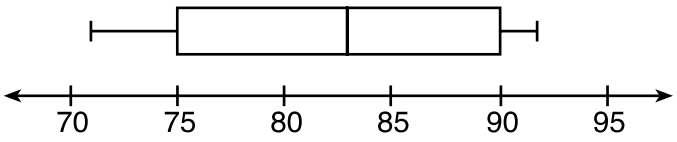
(1) $-13x - 22x + 11$
(2) $-13x^2 + 34x - 29$
(3) $19x^2 - 22x + 11$
(4) $19x^2 + 34x - 29$

4 The zeros of the function $p(x) = x^2 - 2x - 24$ are

(1) -8 and 3
(2) -6 and 4
(3) -4 and 6
(4) -3 and 8

Use this space for computations.

5 The box plot below summarizes the data for the average monthly high temperatures in degrees Fahrenheit for Orlando, Florida.



The third quartile is

(1) 92 (3) 83

(2) 90 (4) 71

6 Joy wants to buy strawberries and raspberries to bring to a party. Strawberries cost \$1.60 per pound and raspberries cost \$1.75 per pound. If she only has \$10 to spend on berries, which inequality represents the situation where she buys x pounds of strawberries and y pounds of raspberries?

(1) $1.60x + 1.75y \leq 10$ (3) $1.75x + 1.60y \leq 10$

(2) $1.60x + 1.75y \geq 10$ (4) $1.75x + 1.60y \geq 10$

7 On the main floor of the Kodak Hall at the Eastman Theater, the number of seats per row increases at a constant rate. Steven counts 31 seats in row 3 and 37 seats in row 6. How many seats are there in row 20?

(1) 65 (3) 69

(2) 67 (4) 71

8 Which ordered pair below is *not* a solution to $f(x) = x^2 - 3x + 4$?

(1) (0,4) (3) (5,14)

(2) (1.5,1.75) (4) (−1,6)