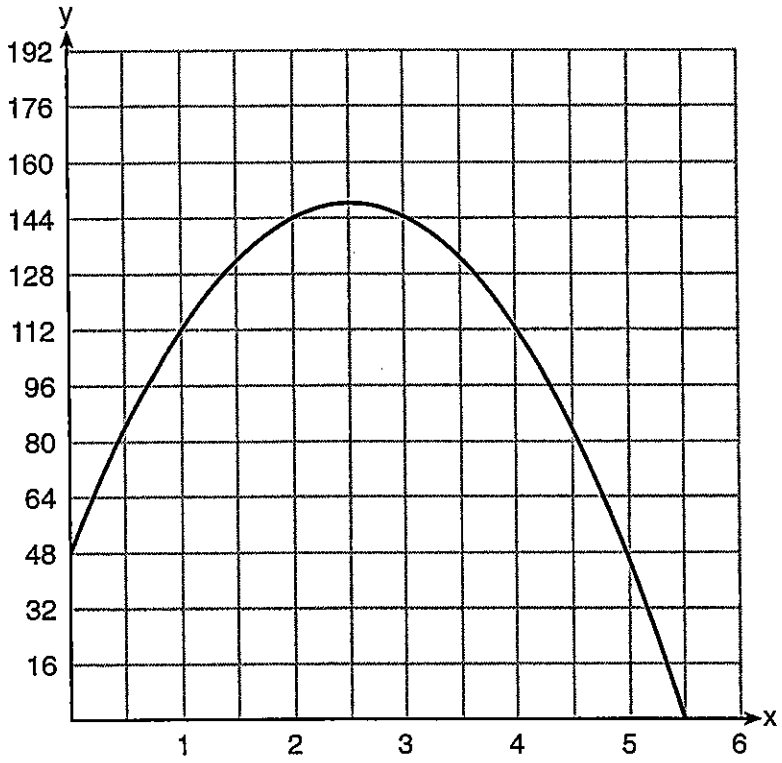
Use this space for computations.

9 A ball is thrown into the air from the edge of a 48-foot-high cliff so that it eventually lands on the ground. The graph below shows the height, y, of the ball from the ground after x seconds.



For which interval is the ball's height always *decreasing*?

(1) $0 \leq x \leq 2.5$

(2) $0 < x < 5.5$

(3) $2.5 < x < 5.5$

(4) $x \geq 2$

10 What are the roots of the equation $x^2 + 4x - 16 = 0$?

(1) $2 \pm 2\sqrt{5}$

(2) $-2 \pm 2\sqrt{5}$

(3) $2 \pm 4\sqrt{5}$

(4) $-2 \pm 4\sqrt{5}$

Use this space for computations.

6 The table below shows the average yearly balance in a savings account where interest is compounded annually. No money is deposited or withdrawn after the initial amount is deposited.

Year	Balance, in Dollars
0	380.00
10	562.49
20	832.63
30	1232.49
40	1824.39
50	2700.54

Which type of function best models the given data?

(1) linear function with a negative rate of change

(2) linear function with a positive rate of change

(3) exponential decay function

(4) exponential growth function

7 A company that manufactures radios first pays a start-up cost, and then spends a certain amount of money to manufacture each radio. If the cost of manufacturing r radios is given by the function $c(r) = 5.25r + 125$, then the value 5.25 best represents

(1) the start-up cost

(2) the profit earned from the sale of one radio

(3) the amount spent to manufacture each radio

(4) the average number of radios manufactured

8 Which equation has the same solution as $x^2 - 6x - 12 = 0$?

(1) $(x + 3)^2 = 21$

(2) $(x - 3)^2 = 21$

(3) $(x + 3)^2 = 3$

(4) $(x - 3)^2 = 3$