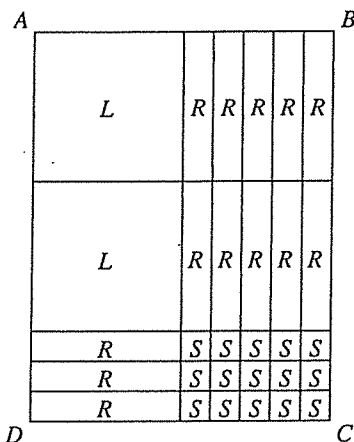**54.** As shown below, rectangle $ABCD$ is divided into 2 large squares (labeled L) each x inches on a side, 15 small squares (labeled S) each y inches on a side, and 13 rectangles (labeled R) each x inches by y inches. What is the total area, in square inches, of $ABCD$?

F. $2x + 13xy + 15y$

G. $6x + 16y$

H. $2x^2 + 15y^2$

J. $2x^2 + 8xy + 15y^2$

K. $2x^2 + 13xy + 15y^2$

55. For some real number A, the graph of the line $y = (A + 1)x + 8$ in the standard (x,y) coordinate plane passes through $(2,6)$. What is the slope of this line?

A. -4
B. -3
C. -1
D. 3
E. 7

56. The graph of the equation $h = -at^2 + bt + c$, which describes how the height, h, of a hit baseball changes over time, t, is shown below.
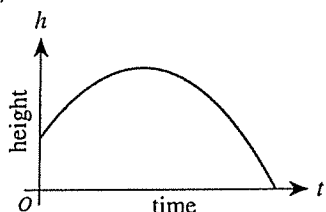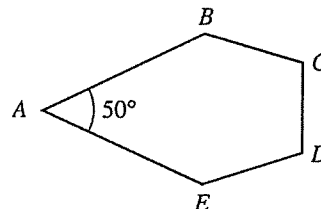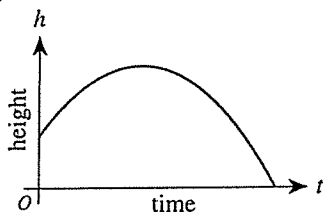

If you alter only this equation's c term, which gives the height at time $t = 0$, the alteration has an effect on which of the following?

   I. The h-intercept
   II. The maximum value of h
   III. The t-intercept

F. I only
G. II only
H. III only
J. I and III only
K. I, II, and III

57. When graphed in the standard (x,y) coordinate plane, the lines $x = -3$ and $y = x - 3$ intersect at what point?

A. $(\ 0,\ 0)$
B. $(\ 0,-3)$
C. $(-3,\ 0)$
D. $(-3,-3)$
E. $(-3,-6)$

58. In pentagon $ABCDE$, shown below, $\angle A$ measures $50°$. What is the total measure of the other 4 interior angles?

F. $130°$
G. $200°$
H. $310°$
J. $432°$
K. $490°$

59. For all real numbers b and c such that the product of c and 3 is b, which of the following expressions represents the sum of c and 3 in terms of b ?

A. $b + 3$

B. $3b + 3$

C. $3(b + 3)$

D. $\dfrac{b + 3}{3}$

E. $\dfrac{b}{3} + 3$

60. Which of the following expresses the number of meters a contestant must travel in a 3-lap race where the course is a circle of radius R meters?

F. $3R$
G. $3\pi R$
H. $3\pi R^2$
J. $6R$
K. $6\pi R$

END OF TEST 2

STOP! DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

DO NOT RETURN TO THE PREVIOUS TEST.

2 △ △ △ △ △ △ △ △ △ **2**

54. As shown below, rectangle $ABCD$ is divided into 2 large squares (labeled L) each x inches on a side, 15 small squares (labeled S) each y inches on a side, and 13 rectangles (labeled R) each x inches by y inches. What is the total area, in square inches, of $ABCD$?

(handwritten: $2x^2$) *(handwritten: each $13xy$)* *(handwritten: x^2 ... x^2)* *(handwritten: each y^2 $15y^2$)*

F. $2x + 13xy + 15y$
G. $6x + 16y$
H. $2x^2 + 15y^2$
J. $2x^2 + 8xy + 15y^2$
K. $2x^2 + 13xy + 15y^2$ *(circled)*

55. For some real number A, the graph of the line $y = (A + 1)x + 8$ in the standard (x,y) coordinate plane passes through $(2,6)$. What is the slope of this line?

A. -4
B. -3
C. -1 *(circled)*
D. 3
E. 7

(handwritten:
$6 = (A+1)2 + 8$
$-2 = (A+1)2$
$-1 = A+1$
$-2 = A$
$m = A+1$
$m = -2+1$
$m = -1$
)

56. The graph of the equation $h = -at^2 + bt + c$, which describes how the height, h, of a hit baseball changes over time, t, is shown below.

graph of h vs time (parabola)

If you alter only this equation's c term, which gives the height at time $t = 0$, the alteration has an effect on which of the following?

   I. The h-intercept ✓
   II. The maximum value of h ✓
   III. The t-intercept ✓

F. I only
G. II only
H. III only
J. I and III only
K. I, II, and III *(circled)*

57. When graphed in the standard (x,y) coordinate plane, the lines $x = -3$ and $y = x - 3$ intersect at what point?

A. $(0, 0)$
B. $(0, -3)$
C. $(-3, 0)$
D. $(-3, -3)$
E. $(-3, -6)$ *(circled)*

(handwritten: $y = -3 - 3$ $(-3, -6)$ $y = -6$)

58. In pentagon $ABCDE$, shown below, $\angle A$ measures $50°$. What is the total measure of the other 4 interior angles?

pentagon ABCDE with 50° at A

F. $130°$
G. $200°$
H. $310°$
J. $432°$
K. $490°$ *(circled)*
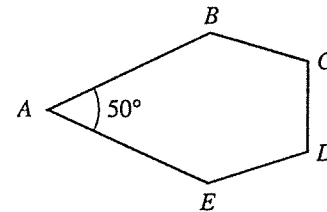
(handwritten:
$(n-2)180$
$= (5-2)180$
$= 540°$
$- 50°$
$490°$
)

59. For all real numbers b and c such that the product of c and 3 is b, which of the following expressions represents the sum of c and 3 in terms of b ?

A. $b + 3$
B. $3b + 3$
C. $3(b + 3)$
D. $\dfrac{b+3}{3}$
E. $\dfrac{b}{3} + 3$ *(circled)*

(handwritten:
$3c = b$
$\frac{3c}{3} = \frac{b}{3}$
$c = \frac{b}{3}$
$c + 3 = \frac{b}{3} + 3$
)

60. Which of the following expresses the number of meters a contestant must travel in a 3-lap race where the course is a circle of radius R meters?
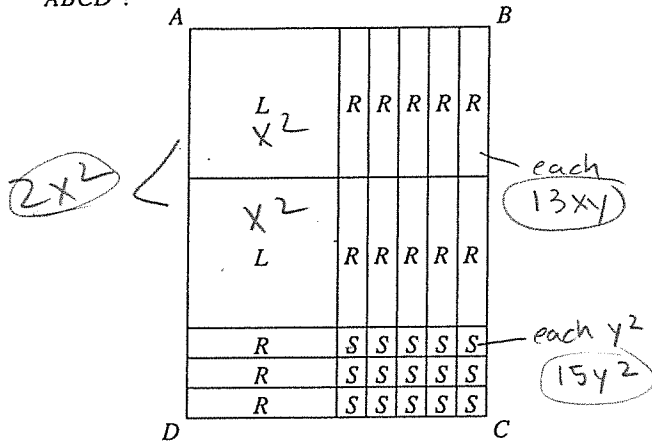
F. $3R$
G. $3\pi R$
H. $3\pi R^2$
J. $6R$
K. $6\pi R$ *(circled)*

(handwritten:
$3 \times$ circumf.
$3(2\pi R)$
$= 6\pi R$
)

END OF TEST 2

STOP! DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

DO NOT RETURN TO THE PREVIOUS TEST.