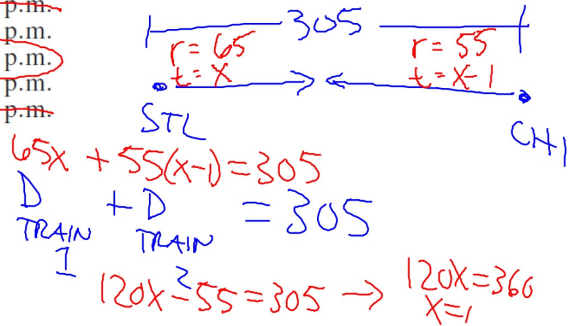
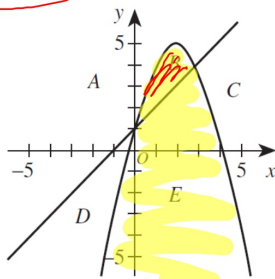


3. At 1:00 p.m. a car leaves St. Louis for Chicago, traveling at a constant speed of 65 miles per hour. At 2:00 p.m. a truck leaves Chicago for St. Louis, traveling at a constant speed of 55 miles per hour. If it is a 305-mile drive between St. Louis and Chicago, at what time will the car and truck pass each other?

- A. 2:30 p.m.  
B. 3:00 p.m.  
C. 4:00 p.m.  
D. 4:30 p.m.  
E. 5:00 p.m.



14. The graphs of  $x - y = -1$  and  $y = -x^2 + 4x + 1$  separate the plane into 5 regions, labeled A, B, C, D, and E in the diagram below. Which region represents the intersection of the graphs of the inequalities  $x - y < -1$  and  $y < -x^2 + 4x + 1$ ?



- F. A  
G. B  
H. C  
J. D  
K. E

$$x - y < -1$$

$$\frac{-y < -1 - x}{-1}$$

$$y > 1 + x$$

12. The owner of a store displays a large jar of nickels and dimes and offers the value of the coins to the person who guesses how many dimes there are. If there are 1,130 coins, and they are worth \$100, how many dimes are there?

- F. 130  
G. 260  
H. 870  
J. 970  
K. 1,000

$N + D = 1130$

$.05N + .10D = \$100$

All dimes  
\$113  
\$13 too much  
 $\div .05$   
260

17. Where are the points (1,2) and (-1,1) in relation to the line  $3x + 4y = 7$ ?

- A. Both are on the line.  
B. One is on the line and the other is off the line.  
C. Both are above the line.  
D. Both are below the line.  
E. One is above the line and the other is below the line.

