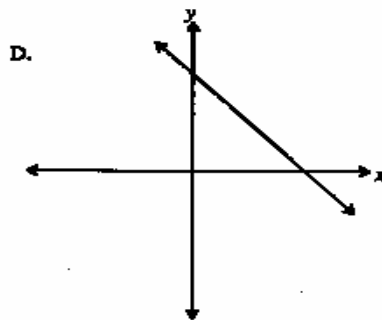
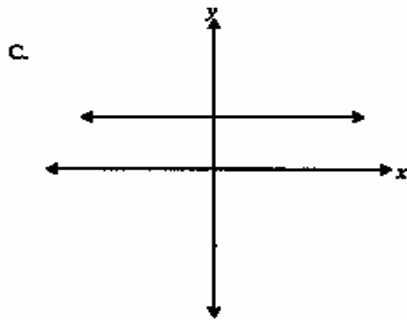
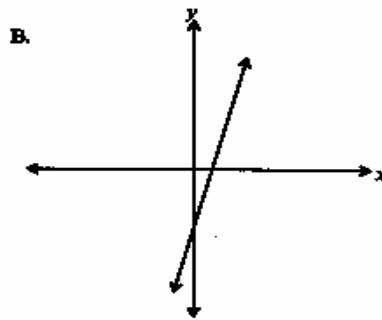
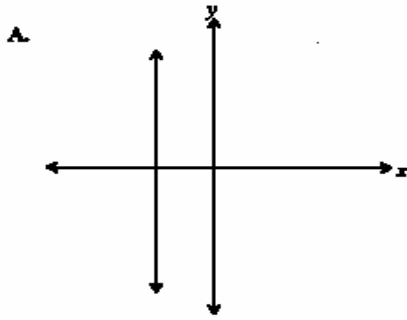


Practice Worksheet
Content Standard: Graphs and Tables

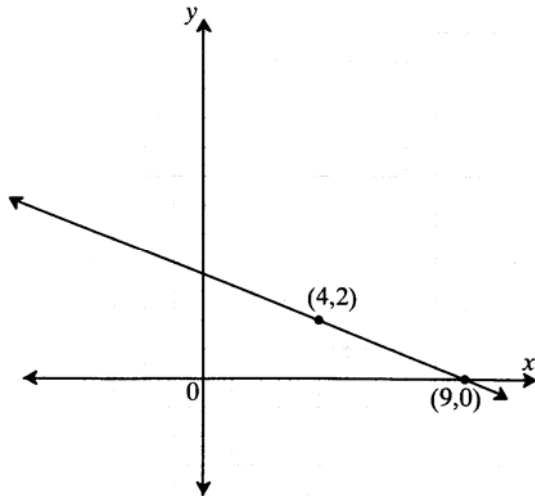
Student Learning Expectations: Use and apply linear functions to model: slope, intersection of lines, equations in Standard and Slope-Intercept form, lines of best fit and real-life situations

1. Using $y = mx + b$, write the equation for the line defined by the points (2,3) and (0,1). Show all of your work, even if you use mental math or the calculator.

2. Which of the following lines has a negative (positive, zero, undefined) slope?



3. What is the y-intercept of the line shown below? Show all of your work, even if you use mental math or a calculator.



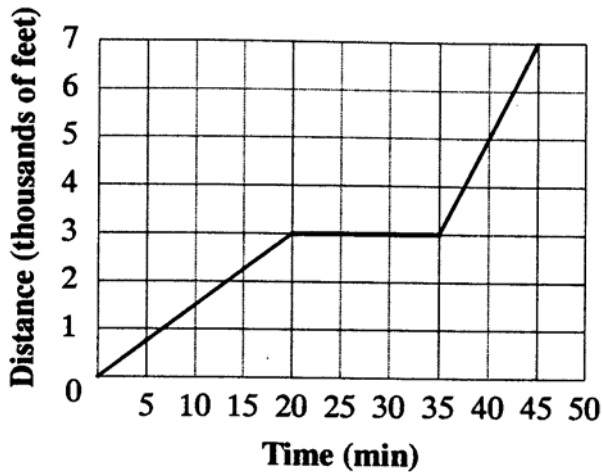
4. Throughout his shift, Randall recorded the total number of items he had produced so far that day in the table shown below. How many items did Randal produce each hour?

Time	9:00 A.M.	12:00 P.M.	2:00 P.M.
Amount Produced	9 items	27 items	39 items

5. It is -5°F at 3 A.M. and 19°F at 11 A.M. What is the hourly rate of change in whole degrees?

6. Through which quadrant will the graph of the equation $y = mx + b$ **NOT** pass if $m < 0$ and $b < 0$?

7. Mary is walking along a hiking trail. The graph below represents her distance from the start of the trail compared to time. Which description is the best interpretation of the graph?



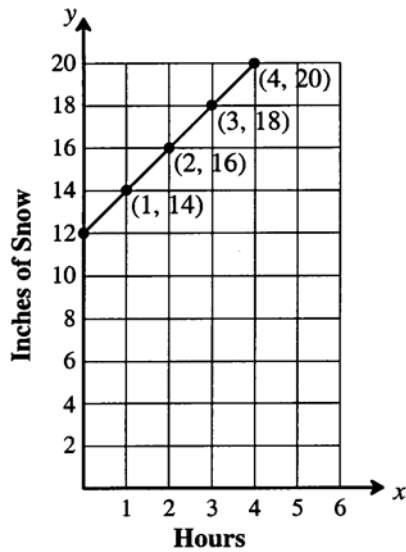
- Mary started slowly, stopped for a few minutes, and then resumed at her previous pace.
- Mary started slowly, stopped for a few minutes, and then walked at a faster pace.
- Mary started quickly, then slowed her pace, then stopped.
- Mary started quickly, stopped for a few minutes, and then walked at a slower pace.

8. What is the equation of the line that passes through the point $(2, -7)$ and has a slope of $\frac{3}{2}$?

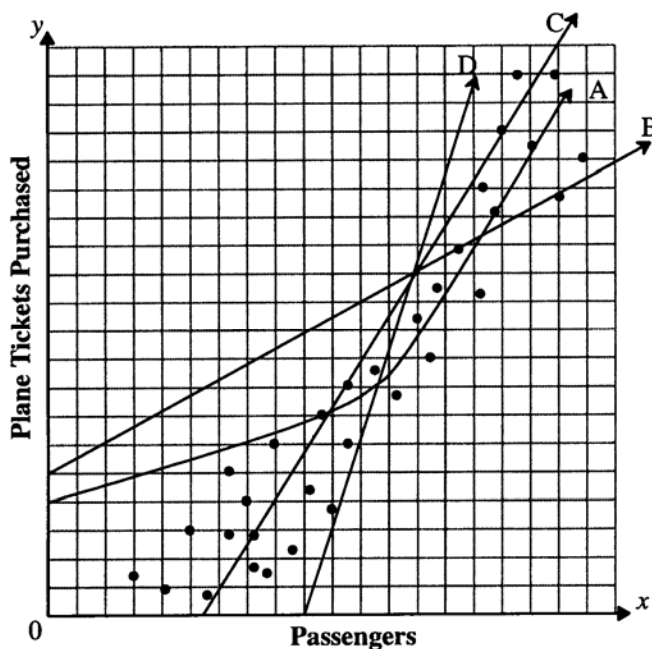
9. What is the **y-intercept** of the line represented by $3y + 6x = 12$?

10. A movie theater charges \$7 for adult tickets (a) and \$4 for children's tickets (c). Last Friday the theater sold 272 tickets and collected \$1,694. Write a system of equations to represent this data.

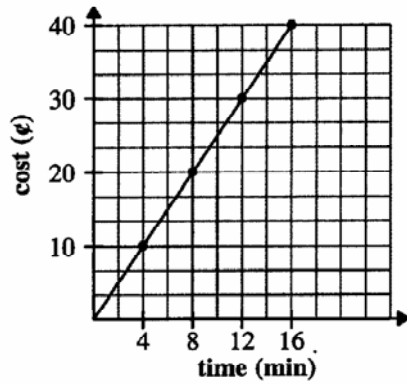
11. When snow is 12 inches deep on a ski slope, a snow-making machine begins to produce snow at a constant rate as shown in the graph below. At what rate is snow produced?



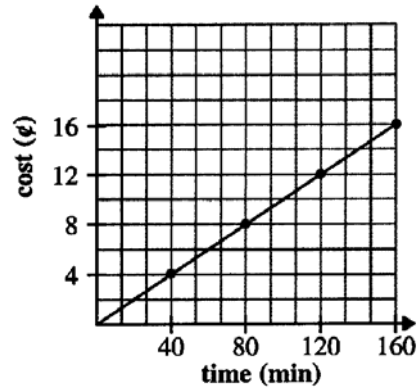
12. Which is the most reasonable line of best fit for the scatterplot shown below?



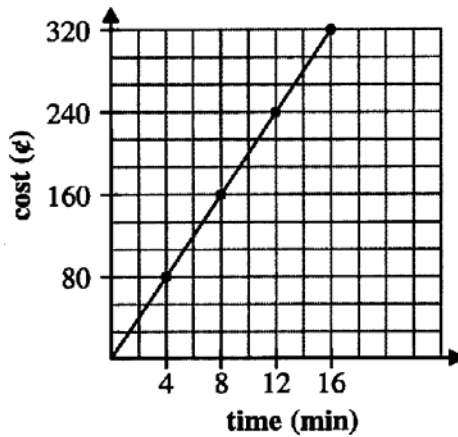
13. A telephone company charges 10¢ per minute for long distance phone calls. Which graph represents a 16-minute long distance phone call from Charlotte to Chicago?



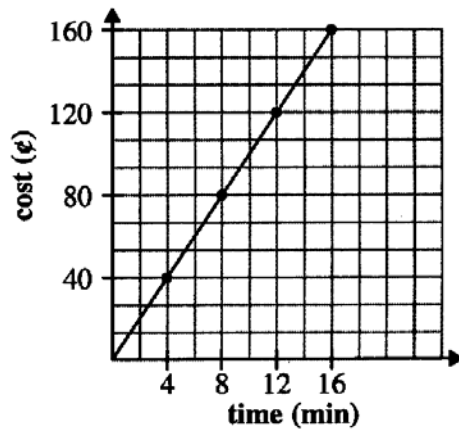
a.



b.



c.



d.

14. There are two hotels that want to offer their guests Internet access. The hotels have different service plans that charge the users as a function of time, t (in minutes), spent on the computer. The hotels' service plans are represented below, where C represents the cost to use the Internet on that plan:

Plan I: $C = 1.00t + 5$

Plan II: $C = 0.65t + 7$

a. According to the equations shown above, how much would someone have to pay after spending ten minutes on the Internet under Plan I? Show all of your work.

b. According to the equations shown above, after what amount of time would Plan I cost the same as Plan II? Show all of your work.

c. Using the equations shown above, explain the meaning of the slope and y-intercept.
