



## Homework 1.2 – Linear Functions

1. (1 pt) [alfredLibrary/AUCI/chapter1/lesson2/question22.pg](#)  
Suppose  $f(x) = 2x + 1$ .

(a) Find the  $y$ -intercept of  $f$  by evaluating  $f(0)$ :

$$y = f(0) = \underline{\hspace{2cm}}$$

(b) Find the  $x$ -intercept(s) of  $f$  by solving  $f(x) = 0$  for  $x$ :

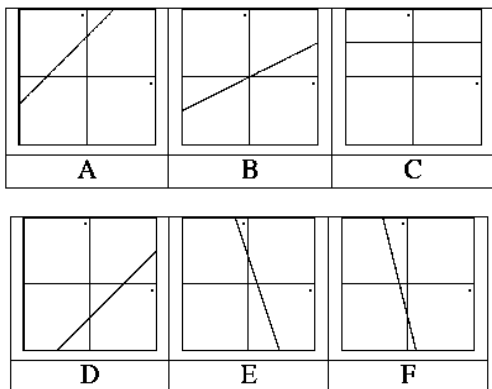
$$x = \underline{\hspace{2cm}}$$

2. (1 pt) [alfredLibrary/AUCI/chapter1/lesson2/question2p.pg](#)

Consider the set of equations below:

_____	$y = x + 6$
_____	$y = x - 5$
_____	$5 = y$
_____	$y = x/2$
_____	$y = -4x - 5$
_____	$-3x + 4 = y$

Without using a calculator, match each equation with one of the graphs by entering the letter of the correct graph in the blank.



3. (1 pt) [alfredLibrary/AUCI/chapter1/lesson2/question7p.pg](#)

Write  $7x - 11y + 16 = 0$  in slope-intercept form.

(a) The slope of the line is \_\_\_\_\_.

(b) The  $y$ -intercept of the line is \_\_\_\_\_.

4. (1 pt) [alfredLibrary/AUCI/chapter1/lesson2/question13p.pg](#)

The table below contains data for a linear function:

$t$	7.2	7.4	7.6	7.8
$f(t)$	565.8	576.6	587.4	598.2

A formula for the function is  $f(t) = \underline{\hspace{2cm}}$ .

HINT: First find the point-slope form of the line.

5. (1 pt) [alfredLibrary/AUCI/chapter1/lesson2/question4p.pg](#)

The amount of money (in dollars) charged a phone company is

$$C(n) = 27.75 + 0.13n,$$

where  $n$  is the number of minutes used.

(a) Which of the following statements correctly explains the significance of the  $y$ -intercept in the equation above?

- A. If you do not use your phone all month, your monthly phone bill will be \$0.13 .
- B. For every minute you talk on the phone your monthly phone bill increases by \$27.75 .
- C. The phone company charges \$0.13 per minute to use the phone.
- D. The fixed monthly service charge is \$27.75 .
- E. All of the above
- F. None of the above

(b) Which of the following statements correctly explains the significance of the slope in the equation above?

- A. If you do not use your phone all month, your monthly phone bill will be \$0.13 .
- B. The fixed monthly service charge is \$27.75 .
- C. The phone company charges \$0.13 per minute to use the phone.
- D. For every minute you talk on the phone your monthly phone bill increases by \$27.75 .
- E. All of the above
- F. None of the above