7.1 Pre-Calculus Math 11

Page 363 #1, 4, 6 + graphing

1. a) $|9| = 9$

b) $|0| = 0$

draw the | | absolute value signs so it is clearly not a one!

c) $|-7| = 7$

d) $|-4.728| = 4.728$

e) $|6.25| = 6.25$

f) $\left|-5\frac{1}{2}\right| = 5\frac{1}{2}$

4. a) $|8-15| =$
$|-7| =$
7

b) $|3| - |-8| =$
$3 - 8 =$
-5

answer can be negative if the minus is outside the absolute value

c) $|7-(-3)| =$
$|7+3| =$
$|10| =$
10

d) $|2-5(3)| =$
$|2-15| =$
$|-13| =$
13

6. a) $2(|-6-(-11)|) =$
$2(|-6+11|) =$
$2(|5|) =$
$2 \cdot 5 =$
10

use order of operations

b) $|-9.5| - |12.3| =$
$9.5 - 12.3 =$
-2.8

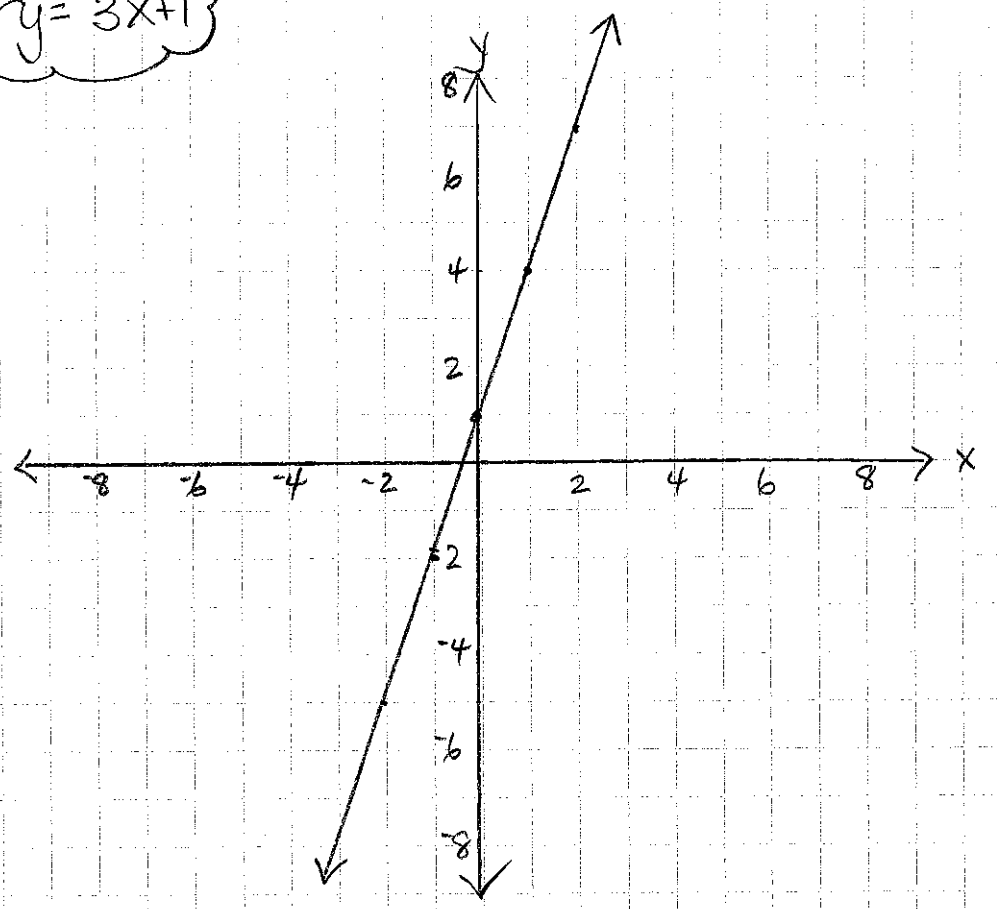
c) $3\left(\left|\frac{1}{2}\right|\right) + 5\left(\left|-\frac{3}{4}\right|\right) =$
$3 \cdot \frac{1}{2} + 5 \cdot \frac{3}{4} =$
$\frac{3}{2} + \frac{15}{4} =$
$\frac{6}{4} + \frac{15}{4} =$
$\frac{21}{4}$

d) $|3(-2)^2 + 5(-2) + 7| =$
$|3 \cdot 4 + (-10) + 7| =$
$|12 - 10 + 7| =$
$|9| =$
9

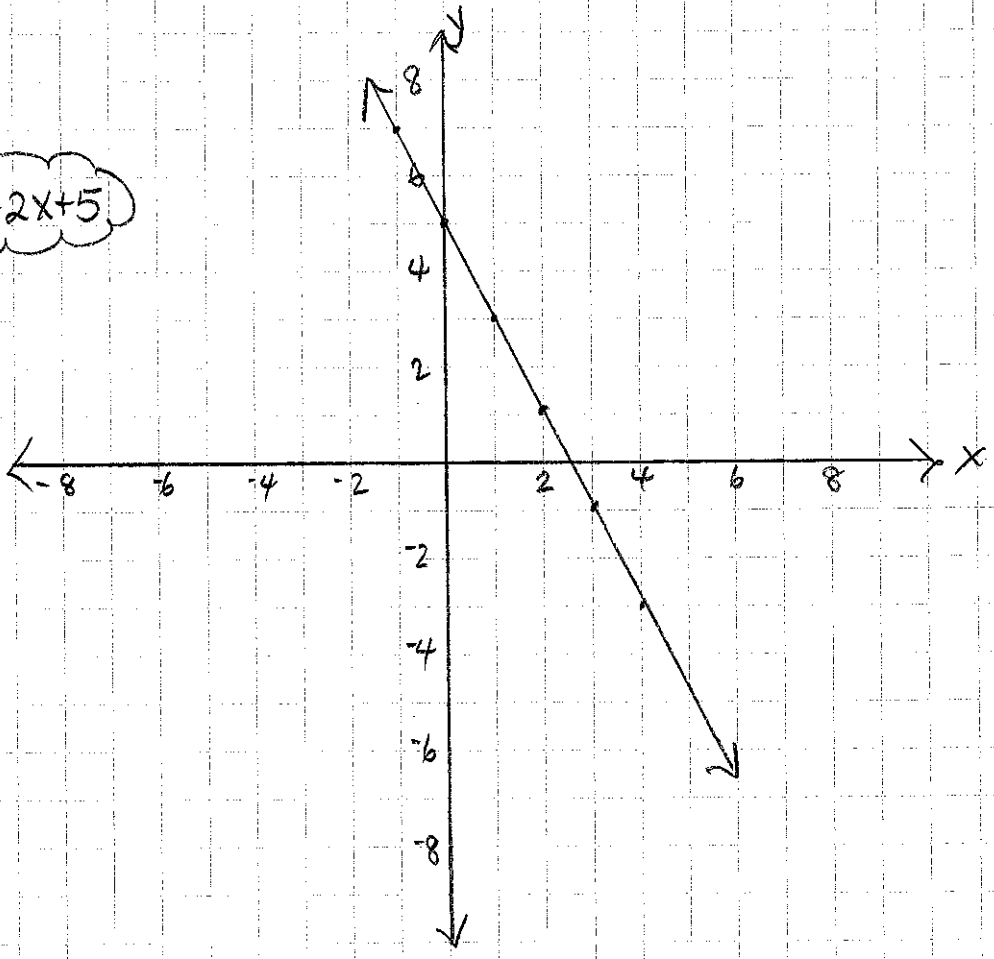
e) $|-4+13| + |6-(-9)| - |8-17| + |-2| =$
$|9| + |6+9| - |-9| + 2 =$
$9 + |15| - 9 + 2 =$
$9 + 15 - 9 + 2 =$
17

7.1 graphing

$y = 3x+1$



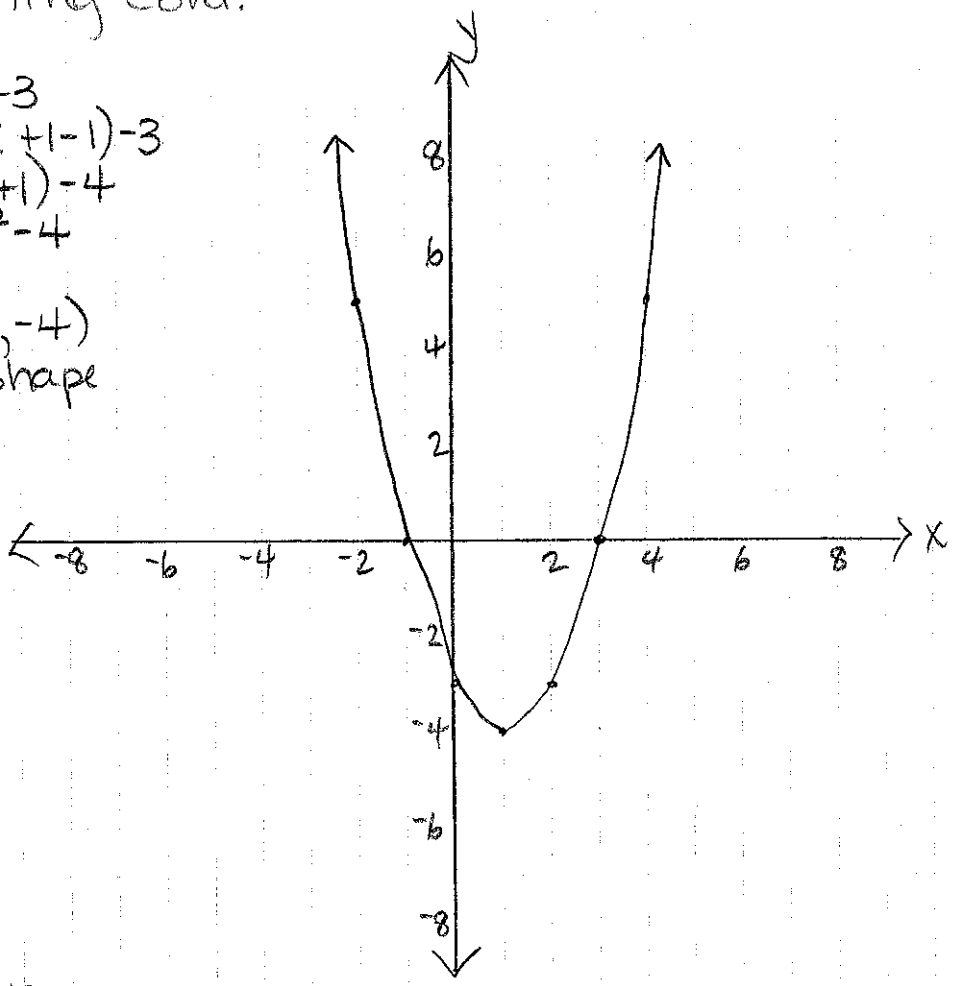
$y = -2x+5$



7.1 graphing cont.

$y = x^2 - 2x - 3$
$y = (x^2 - 2x + 1 - 1) - 3$
$y = (x^2 - 2x + 1) - 4$
$y = (x-1)^2 - 4$

vertex $(1, -4)$
regular shape
opens up



$y = x^2 + 8x + 12$
$y = (x^2 + 8x + 16 - 16) + 12$
$y = (x^2 + 8x + 16) - 16 + 12$
$y = (x+4)^2 - 4$

Vertex $(-4, -4)$
regular shape
opens up