1.4 8-26-13

(47.)

$-5 \overset{?}{>} -11$

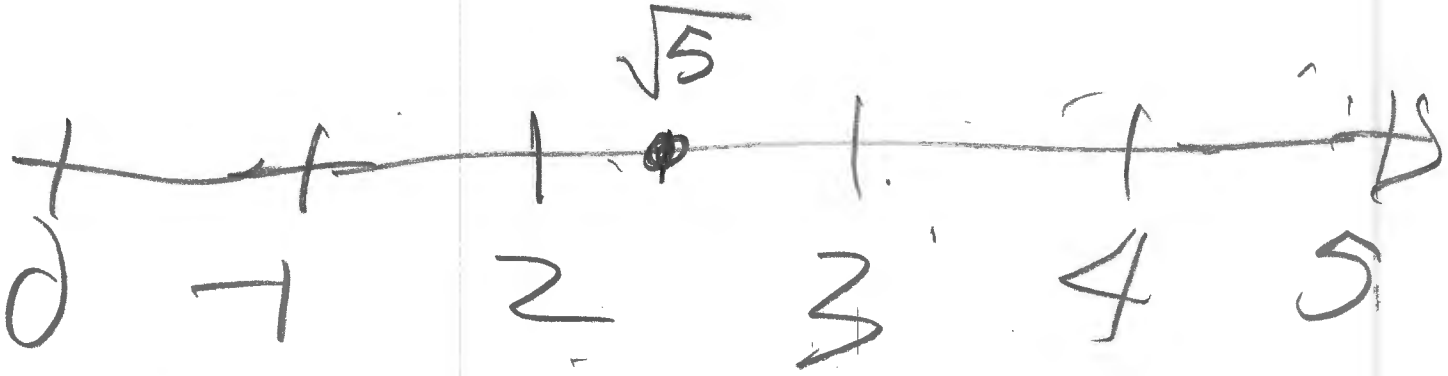
$-5 \overset{?}{<} -11$

update GRID (1.4)

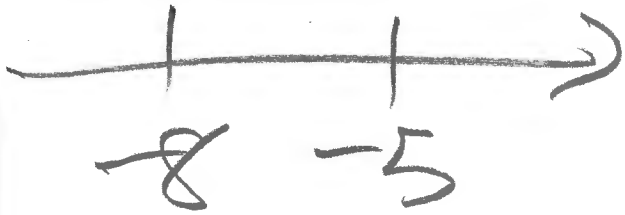
(√ = done in class)

EX		Problems
6	→	75, 77, 79.
7	→	(47)√, 45√, 43√, 41√, 49.
8.	→	53√, 55√
9.	→	63√, 65√, 67, 69, 71, 73√

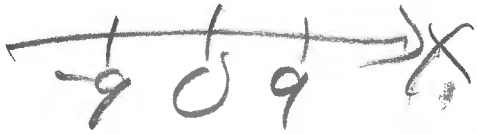
(37) $\sqrt{5} < 3$ and $2 < \sqrt{5}$



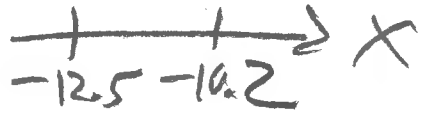
(45) $-8 < -5$



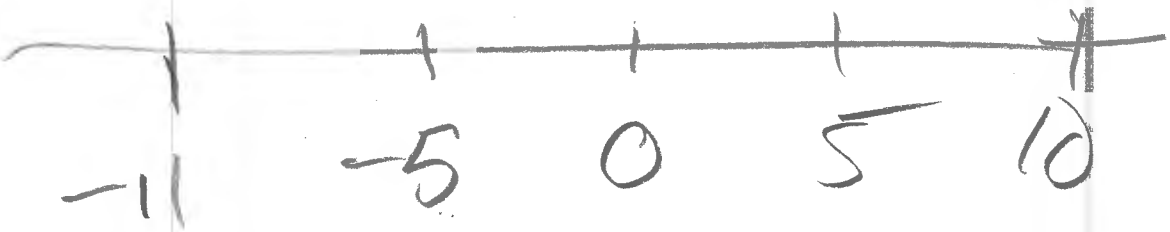
(43) $-9 < 9$



(41) $-12.5 < -10.2$



47. $-5 > -11$



27. see #25

31. see #25

37. $\sqrt{5}$ w/o calculator

GUESS!

$\sqrt{4} = 2$ because $2^2 = 2 \cdot 2 = 4$

$\sqrt{9} = 3$ because $3^2 = 9 = 3 \cdot 3$

you DO AT HOME

(53) $-2 < x$

$x > -2$

< OR =

(55) $10 \leq y$

$y \geq 10$

> OR =

(63) $|-58| = 58$ = DISTANCE

← DISTANCE →

$-58 \quad 0$

(65) $|12.2| = 12.2$; you got it!

what is |x|?

(73) $|x| = ?$ if $x = -8$?

$|x| = 8$

$|-8| = 8$ = answer!

$x = -8$ substitution

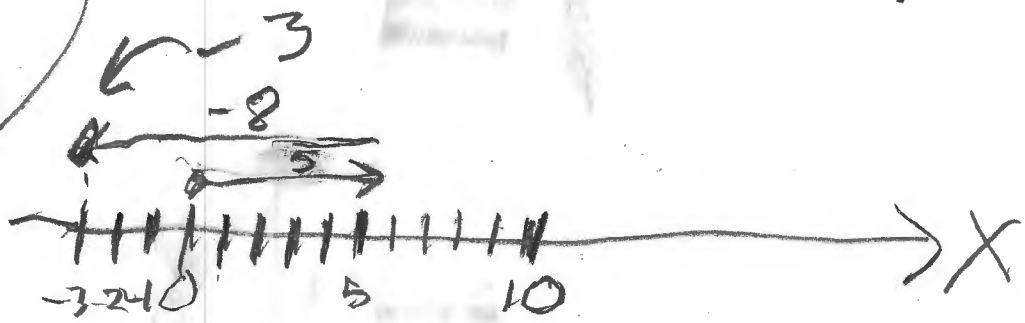
---

sec 1.5 Grid

Ex	problem	✓ = done in class
1	9 ✓	
2	7 ✓	
3	13 ✓	
4	11 ✓	
5	15, 17, 19, 21, 25, 27 ✓	
6	55 ✓	
7	59 ✓	
8	69, 71, 73, 79, 77, 75 ✓	

8-26-13

(7)



$5+(-8)$ fast method

check $|-8| > |5|$ yes

$5+(-8) = -(8-5)$

$= -(3)$

$= -3$

(9.)

$-6+10$ check

$|-6| < |10|$? yes

$-6+10 = +(10-6) = +(4)$

(13) $-3+(-5)$

$= -(3+5)$

$= -(8)$

$= -8$

(11.) $-7+0 = -7$

anything $+0$ = anything

(15.) $-35+0 = -35$

(17.) $0+(-8) = -8$

(27.) $10+(-12) = -(12-10)$

$= -2$

↑ DEPOSIT ↑ WITHDRAWL

55

-38

$35 + (-14) + (-19) + (-5)$

14
19
33
5
38

$35 + (-38) = -(38 - 35)$

$= -3$

59

$2.89 + 0.15 - 0.03 + 0.17$

0.15
0.17
0.32

$0.15 - 0.03 + 0.17$

CHANGE:

$= 0.32 - 0.03$

$= 0.29$

(59.)

$$\begin{array}{r} 0.32 \\ -\,0.03 \\ \hline 0.29 \end{array}$$

combine like terms:

Like		unLike	
x	$-2x$	x	$-2x^2$
x^2	$4x^2$	x	$4x^2$
y	$2y$	y	z
z	4	$2x$	4

can be ADDED or subtracted

cannot be ADDED TO SIMPLIFY BY combining

(69) $7a + 10 \cdot a = 17a$

$= a \cdot (7 + 10) = a \cdot (17) = 17a$

$= (7 + 10) \cdot a$

$= (17) a$

$= 17 \cdot a$

(71) $-3 \cdot x + 12 \cdot x$

$(-3 + 12) \cdot x$

$= (9) \cdot x$

$= 9x$

(73) $4t + 21t$

$= (4+21)t$

$= (25)t$

$= 25t$

(79) $-3 + 8x + 4 + (-10x)$

$= 1 + (-2x)$

$= 1 - 2x$

$-3 + 8x + 4 - 10x$

$-3 \quad +8x$

$1 - 2x$ student work

WORK

$8x + (-10x) = ((8 + (-10))x = (-2) \cdot x.$

$8 \cdot x + (-10 \cdot x)$

$= (8 + (-10))x = (-2) \cdot x$

$= -2x.$

(12.

(77.)

$$-8y + (-2y)$$

$$= -8 \cdot \underline{y} + (-2) \cdot \underline{y}$$

$$= (-8 + (-2)) \cdot \underline{y}$$

$$= (-10) \cdot \underline{y}$$

$$= -10y$$

2 with ORANGES.
Because $-8 + (-2) = -10$.
2 negatives.

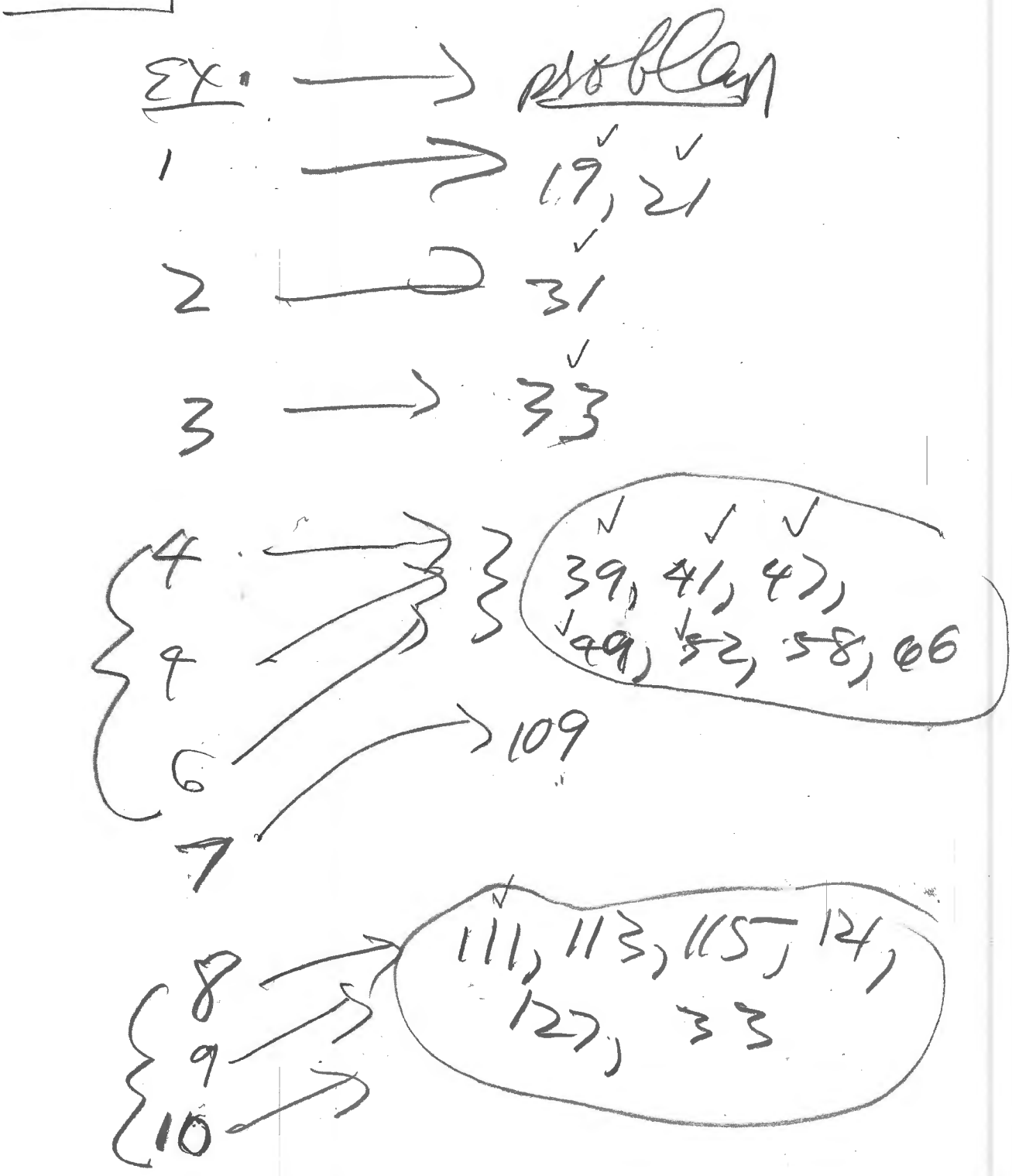
(75.) $7m + (-9m)$ $\frac{9}{-7}$ $\frac{}{2}$ ← student work.

$-2m$

note: $7 + (-9)$
$2 - (9 - 7) = -2$

1.6

#2 done in class



(19) 51; opposite $= -51$

note: $51 + (-51) = 0$

(21) $-\frac{11}{3}$; opposite $= -\left(-\frac{11}{3}\right)$

$= +\frac{11}{3}$

tip: change the sign with for each negative.

(31) $-(-x)$ when $37 = x$

change sign twice

$-(-x) = 37$

when $x = 37$

37

-37 1st change

-37 2nd change $= 37$

(15

$-\frac{2}{3} = x$

Find $-(-x) = -\frac{2}{3}$ when $x = -\frac{2}{3}$

change sign twice.

$-\frac{2}{3}$

$\frac{2}{3}$ 1st change

$-\frac{2}{3}$ 2nd change (back to original sign)

tip: 2 changes, you are back to original sign.

Tip: ODD changes, you have an opposite sign from original.

(16.

(39.) V

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

sec 1.6 $a - b = a + (-b)$

use sec 1.5 work

$7 + (-10) = -(10 - 7)$

$= -3$

$|-10| > |7|$

$7 - 10$

step 1 → $7 + (-10)$

convert addition

step 2 → use sec 1.5 $= 7 + (-10) = -3$

(46.) $0-6 = 0+(-6)$

$= -6$

(47.) $-9-(-3)$

$a-(b) = a+(-b)$

$a=-9 \quad = a+(-b)$

$b=-3 \quad = -9+3$

sec 1.5 $= -(9-3)$

$= -6.$

SHORT cut: $-9-(-3) = -9+3$

(neg)(neg)=pos $= -6$ (sec 1.5)

Sec 1.6

(49.)

$-8-(-8)$

$=-8+8=0$

(51.) $12-16$

$=12+(-16)$

$=-(16-12)$ sec 1.5

$=-4$

(111.) $-31+(-28)-(-19)-17$

1st step: convert to addition $\rightarrow -31+(-28)+(19)+(-17)$

sec 1.5: $(-76)+14=-(76-14)=-62$