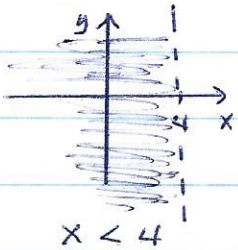
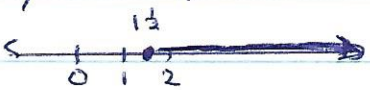
If there is an error on the key, please let me know! ☺

Semester I Exam Review

1. $8
2. 30 mph
3. $Q = \frac{V}{T}$
4. 8
5. 3,817.04
6. 24.2 ft
7. $-\frac{9}{4}$
8. $-2\frac{1}{2}$
9. 2
10. $x = 0$; $x = -2\frac{2}{3}$
11. $-4, -14$
12. 

$x < 4$
13. $d \leq -8$ or $d \geq 4$
14. $-7 < x < 2$
15. $-27u^6r^{18}t^{12}$
16. $8^3x^3y^4$
17. $\frac{y^3}{x^{18}}$
18. $-1 - 9i$
19. -36
20. $-27 + 5i$
21. 4.8×10^7
22. 2.6703×10^{-1}; 0.26703
23. $6\sqrt{2}$
24. 10 units
25. integers, rational numbers, real numbers
26. rational numbers, real numbers
27. $>$
28. $<$
29. $>$
30. $-500; \frac{1}{500}$
31. $1.74, -\frac{50}{87}$
32. Distributive Prop.
33. Commutative, $\cdot$
34. 8
35. -55
36. -1
37. 32
38. $19y - 9$
39. $t = \frac{S}{5r^2}$
40. $s = 8t - 8$; $s = 28$ mph
41. $r \geq 1\frac{1}{2}$ 

42. $K \geq -4$ 

43. $m > -5$ 

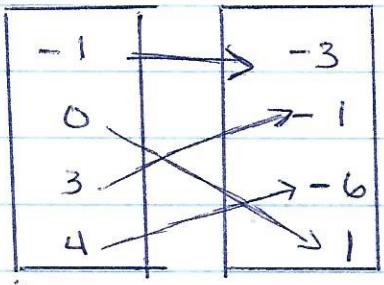
44. All real numbers 
45. $x < -3$ or $x > 5$ 

46. $5.5 \leq x \leq 9$
47. $x \leq -11$ or $x \geq 8$ 

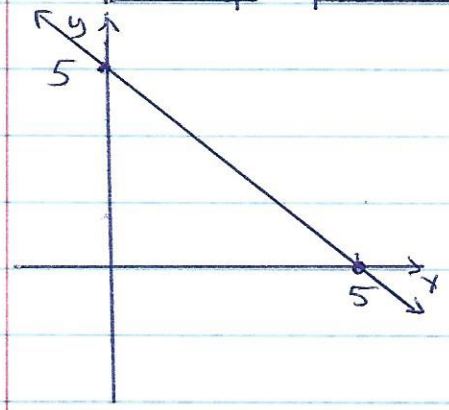
(48) $-18 < x < 8$

(49) $\frac{11}{20}$

(50)



(51)



(52) 4

(53) $8x + y = -18$

(54) $-\frac{1}{2}$

(55) slope is undefined

(56) $y = \frac{4}{5}x + \frac{22}{5}$

(57) $y = -3x - 6$

(58) $x = -7$

(59) yes; $k = 4$; $y = 4x$

(60) yes; $k = 1.2$; $y = 1.2x$

(61) yes; $\frac{5}{6}$

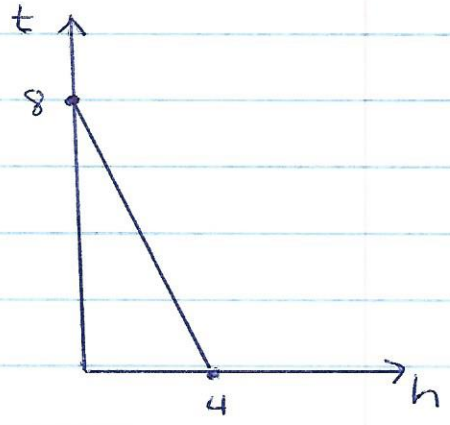
(62) no

(63) 46

(64) 4.1

(65) 284.8 mi

(66) $t = -2h + 8$



(67) $C = 0.60d + 1.20$

(68) ~~$S = 20$~~ $S = 230T - 200$;
2560 lb.

(69) $h(t) = -1.5t + 13$; 4 inches

(70) $V = (-\frac{3}{2}, 0)$; $m = \pm 2$
opens downward

(71) $(\frac{2}{3}, -4)$

(72) $y = |x - 4|$

(73) (a) $\begin{cases} C = 3.00d + 32 \\ C = 3.25d + 30.5 \end{cases}$ (b) 6

(74) independent

(75) inconsistent

(76) $(0, -5)$

(77) $(24, -2)$

(78) $(-1, -6, 1)$

(79) length = 39.4 cm; width = 7.9 cm

(80) $(5, 3)$

(81) $(0, -2)$

(82) no solution

(83) infinitely many solutions

(84) $(1, 3, 1)$

(85) $(-3, -2, -5)$

(86) $(0,0)$; $(2,0)$; $(4,6)$; $(0,2)$
maximum of 8 at $(2,0)$

(87) $(4, 2, 3)$

(88) 4×4

(89) 3×2, -7

(90) not possible

* (91) $\begin{bmatrix} 7 & -4 & 2 \\ -4 & -6 & 6 \end{bmatrix}$

(92) $\begin{bmatrix} -5 & -1 \\ -7 & 2 \end{bmatrix}$

(93) $x = -1$; $y = 3$

(94) $t = -8$; $y = 6$

(95) $\begin{bmatrix} -1 & 11 \\ 6 & -4 \end{bmatrix}$

(96) $\begin{bmatrix} 1 & -9 \\ -7 & 7 \end{bmatrix}$

(97) $\begin{bmatrix} -20 \\ -16 \end{bmatrix}$

(98) $\begin{bmatrix} -42 & 24 & 0 \\ 18 & 0 & -30 \\ -36 & -12 & -6 \end{bmatrix}$

(99) $\begin{bmatrix} -20 & -4 \\ -53 & -25 \end{bmatrix}$

(100) defined; 2×1

(101) $-\frac{1}{4}$

(102) $\frac{4}{3}$

(103) -102

(104) $\begin{bmatrix} -24 \\ 15 \end{bmatrix}$

(105) $\begin{bmatrix} -7 \\ -2 \end{bmatrix}$

(106) $(-3, -2, -4)$

(107) no unique solution

(108) $(x+6)(x+8)$

(109) $(x-9)(x+7)$

(110) $(3x+5)(x+7)$

(111) $(4x+5)^2$

(112) $(3x+4)(3x-4)$

(113) $5i\sqrt{2}$

(114) $-6-4i\sqrt{3}$

(115) 15 years; 13 years

(116) 9:30 AM

(117) 10 min

(118) $\frac{11}{36}$

(119) 7 batchs

(120) not red : total = 11 : 15