Answers to Mock Final #2, the first mock final we took in class.

1)

(a) The top of a hill rises 160 feet above Checkpoint 3. What is the altitude of the top of the hill?

-17 ft

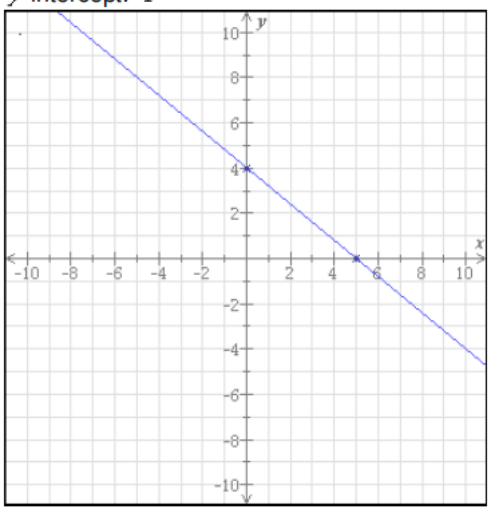
(b) How much lower is Checkpoint 2 than Checkpoint 5?

74 ft lower

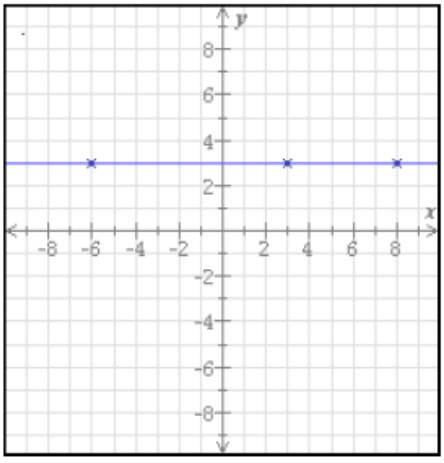
2)

slope: $-\frac{4}{5}$

y-intercept: 4



3)



4)

(a) What was the greatest number of orders in a month?

3350 orders

(b) When did the number of orders have the greatest decrease?

May to *June*

5) 25

6) $6u^2v^2\left(3u^7v^6+5x^5\right)$

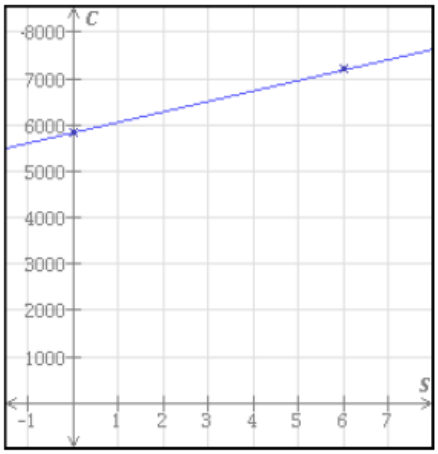
7) $-72a^7b^9+63a^4b^5$

8) y = 7

9) $-26w+18z$

10) x = 63

11) $C = 5850+225S$



12) $4v^6u^3$

13)

Equation of perpendicular line: $y=\frac{1}{5}x+\frac{27}{5}$

Equation of parallel line: $y=-5x+21$

14)

$\left(\frac{4}{9}\right)^0 = 1$

$-(4)^0 = -1$

15) y = 4

16) $4v^3 - 5$

17) $\frac{1}{x^2}$

18) $(y-2)(y+9)$

19) $19.50

20) vertical line: $x = -3$
horizontal line: $y = -1$

21) 77

22) $(5w-7)\left(w^2-6\right)$

23) -13

24) $900

25) 10.2%

26) 2.6 hours

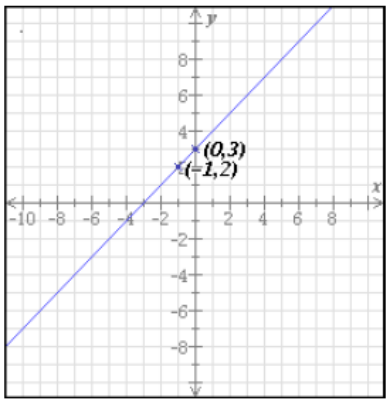
27) x-intercept: $-\frac{10}{9}$
y-intercept: $\frac{5}{4}$

28) 207 miles

29) $37.66

30) $\frac{6}{v^5}$

31)



32) -3/2

33) -3/2

34) $42v+28y-35$

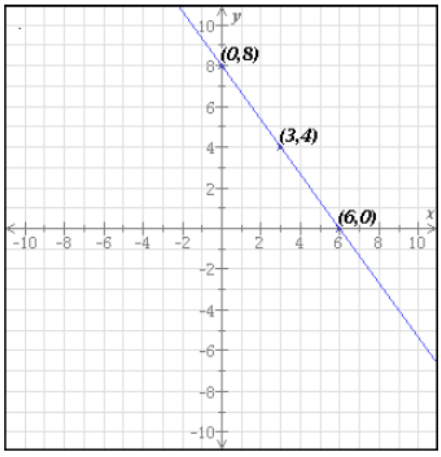
35) $y=-\frac{2}{5}x+4$

36) $5u^2+11u+15$

37) -2

38) x = -7

39)



40) 146 adult tickets

41) $v^2+12v+36$

42) z^2-36

43)

$u = -\frac{21}{20}$

44) 1

45) $x = \frac{z}{k} - 5$

46) 81 tickets

47) $v^2 + v - 12$

48) -27

49) $w = -\frac{1}{3}$

50) $3v^5(v-2)(3v-5)$

51) One possible answer is $(x, y) = (6, 0)$

52) 4.5×10^2

53) $2x^2 - 5x - 6$

54) $10.07

55) 21.07yd^2

56) $\frac{64v^4y}{x^4}$

57) QR =34

58) $(7-u)(v+3u)$

59) 25/16

60) $W = 500 + 30T$