

Exam 2 Review Problems

Chapter 2 Review

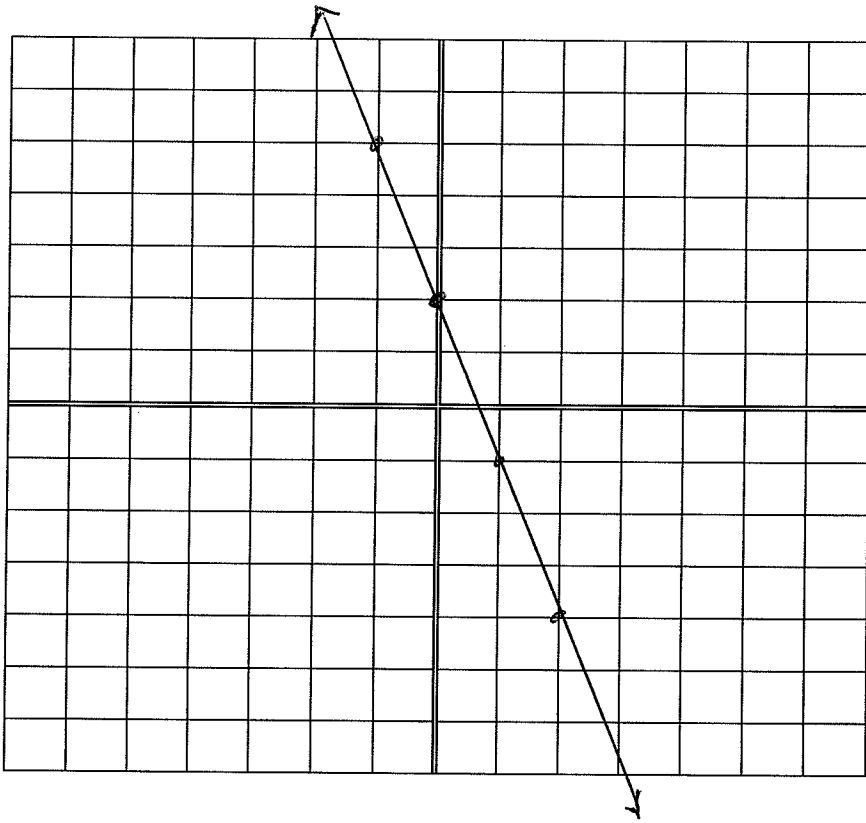
- 2) False; a vertical line does not have a y-intercept.
- 3) False; a horizontal line does not have an x-intercept.
- 6) True
- 12) no, not a solution
- 13) yes, is solution
- # 15, 16, 12, 18 (See graphs at end)
- 20)
 - a) $f(2) = 3$
 - b) Domain: $\{x \mid -2 \leq x \leq 4\}$
 - c) $x = -1$
 - d) Range: $\{y \mid 1 \leq y \leq 5\}$
- 21) median age of cars in 2010 = 10.5 years
- 22) slope: -4, (0, -9) (See graph at end)
- 23) slope: $\frac{1}{3}$, $\left(0, -\frac{7}{3}\right)$ (See graph at end)
- 24) Rate of change is \$7.5 thousand/year or \$7500/year
- 27) $m = \frac{4}{7}$
- 28) undefined slope
- 29) Rate of change is 159,475 homes/month started
- 30) 645 signifies the average tuition cost is growing by \$645 per year
9800 signifies the average tuition cost in 1997 was \$9800
- 31) $f(x) = \frac{2}{7}x - 6$
- # 32 (See graph at end)
- 34) 7 months (See graph at end)
- 36) linear ($f(x) = \frac{3}{8}x - \frac{7}{8}$)
- 37) non-linear (square power of variable)
- 38) non-linear (variable in denominator)
- 39) $y - 4 = -2(x + 3)$
- 40) $f(x) = \frac{4}{3}x + \frac{7}{3}$
- 41) perpendicular
- 42) parallel
- 43)
 - a) $R(t) = -0.0215t + 19.75$
 - b) 2008: about 19.21 seconds, 2013: about 19.105 seconds
- 44) $y = \frac{3}{5}x - \frac{31}{5}$
- 45) $y = -\frac{5}{3}x - \frac{5}{3}$

- 47) 26
- 48) 102
- 49) -17
- 51) $3a + 3b - 6$

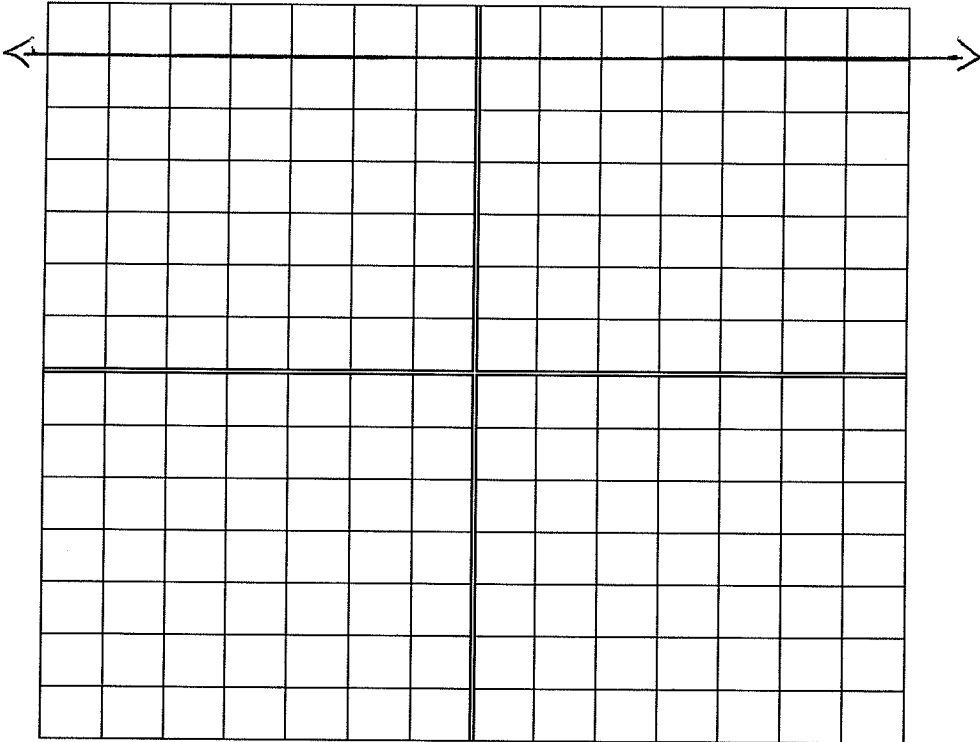
Chapter 3 Review

- 1) substitution
- 2) elimination
- 4) dependent
- 5) inconsistent
- 7) parallel
- 11) $(-2, 1)$
- 12) $(3, 2)$
- 13) $\left(-\frac{11}{15}, -\frac{43}{30}\right)$
- 14) no solution
- 15) $\left(-\frac{4}{5}, \frac{2}{5}\right)$
- 16) $\left(\frac{37}{19}, \frac{53}{19}\right)$
- 18) $(2, 2)$
- 19) $\{(x, y) \mid 3x + 4y = 6\}$
- 20) DVD: \$17, videocassette: \$14
- 21) In 4 hours the passenger train overtakes the freight train.
- 22) 4 L of 15% juice, 10 L of 8% juice
- 26) no solution
- 29) $10\frac{2}{3}$ oz. of lemon juice, $21\frac{1}{3}$ oz. of linseed oil
- 30) 29 pallets of lumber, 13 pallets of plywood

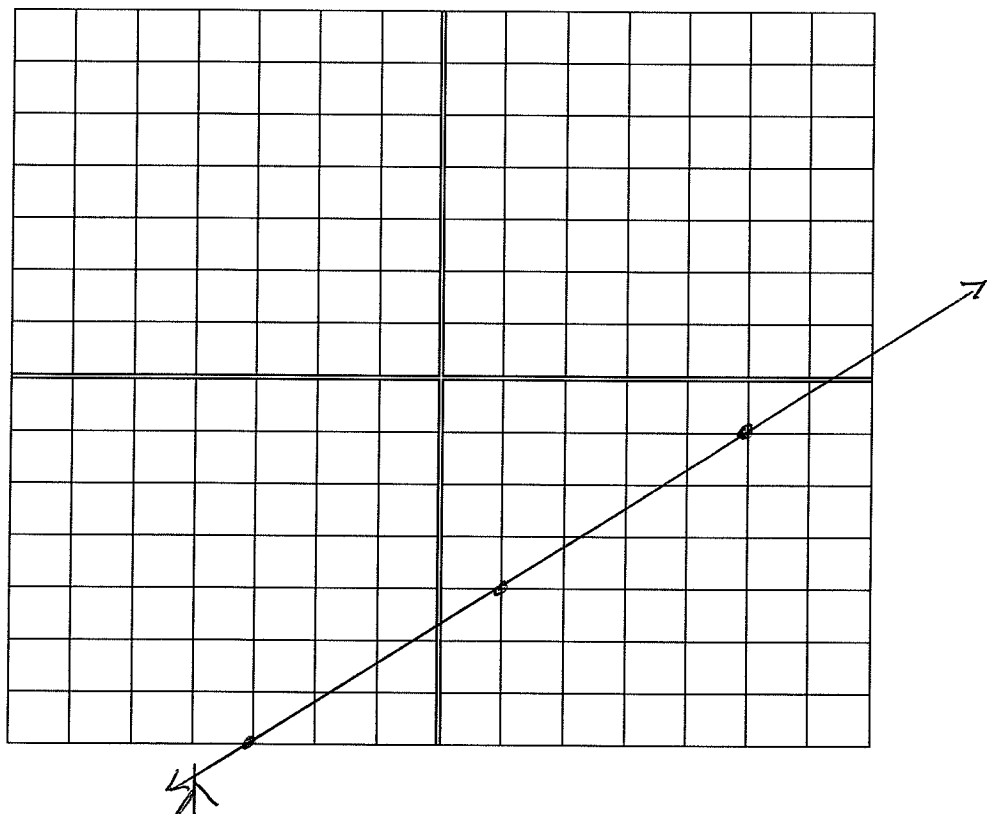
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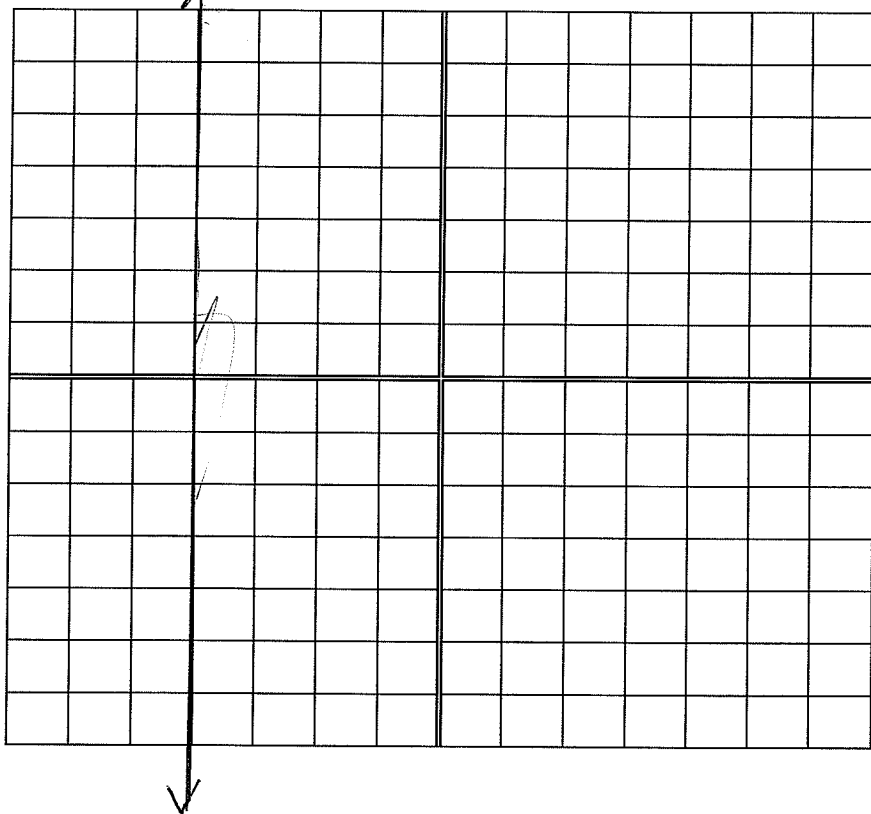
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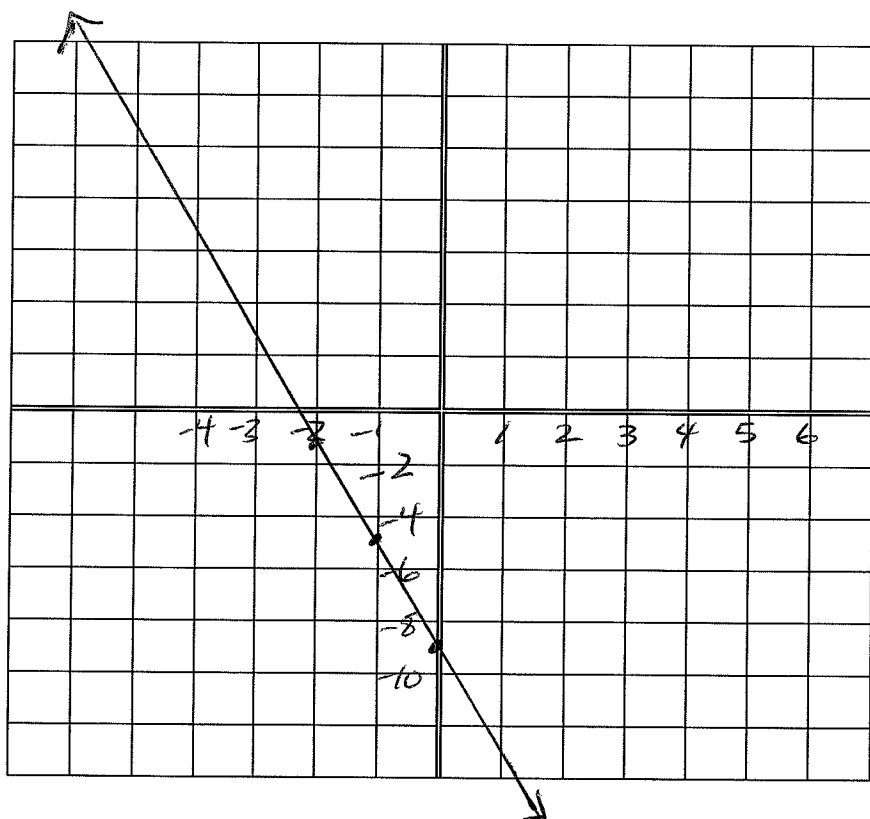
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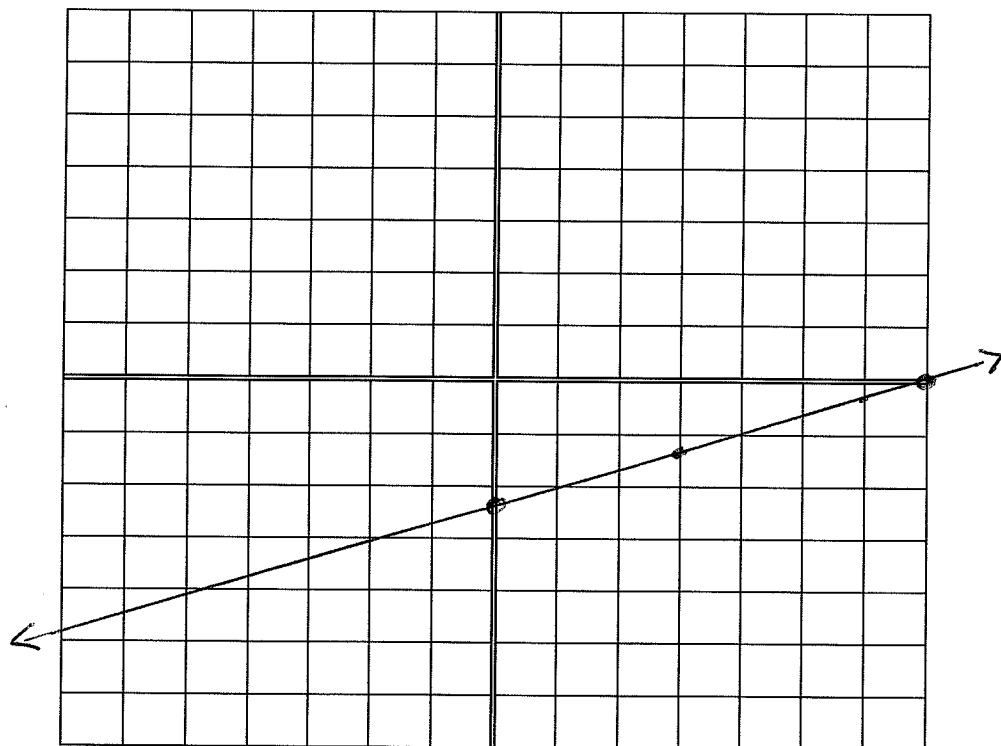
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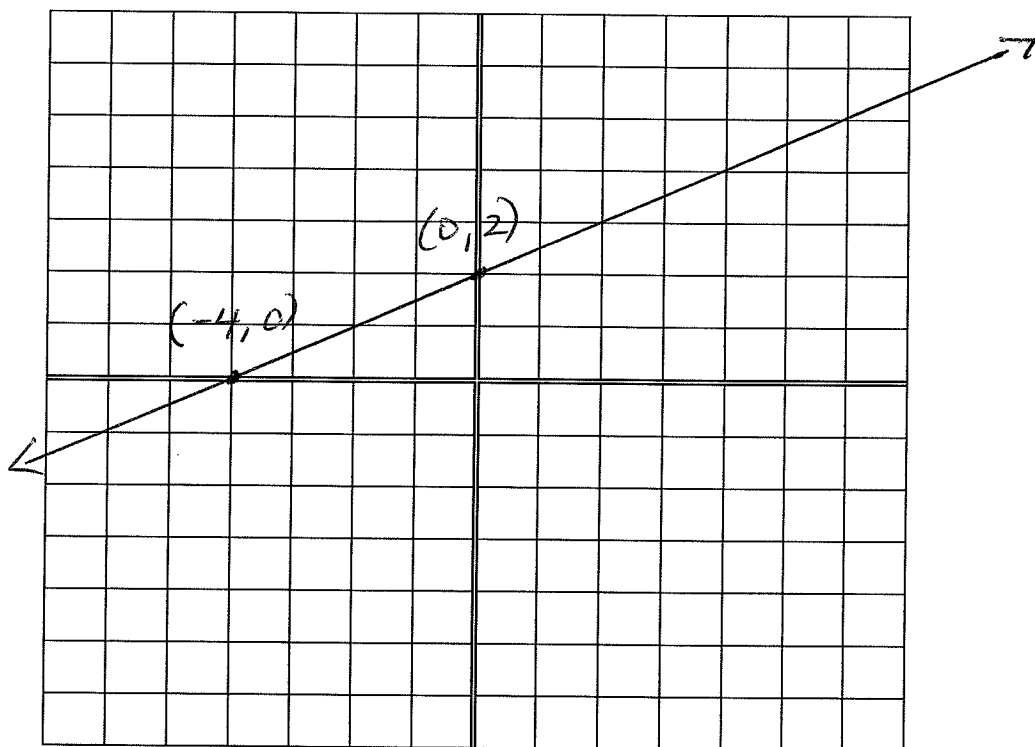
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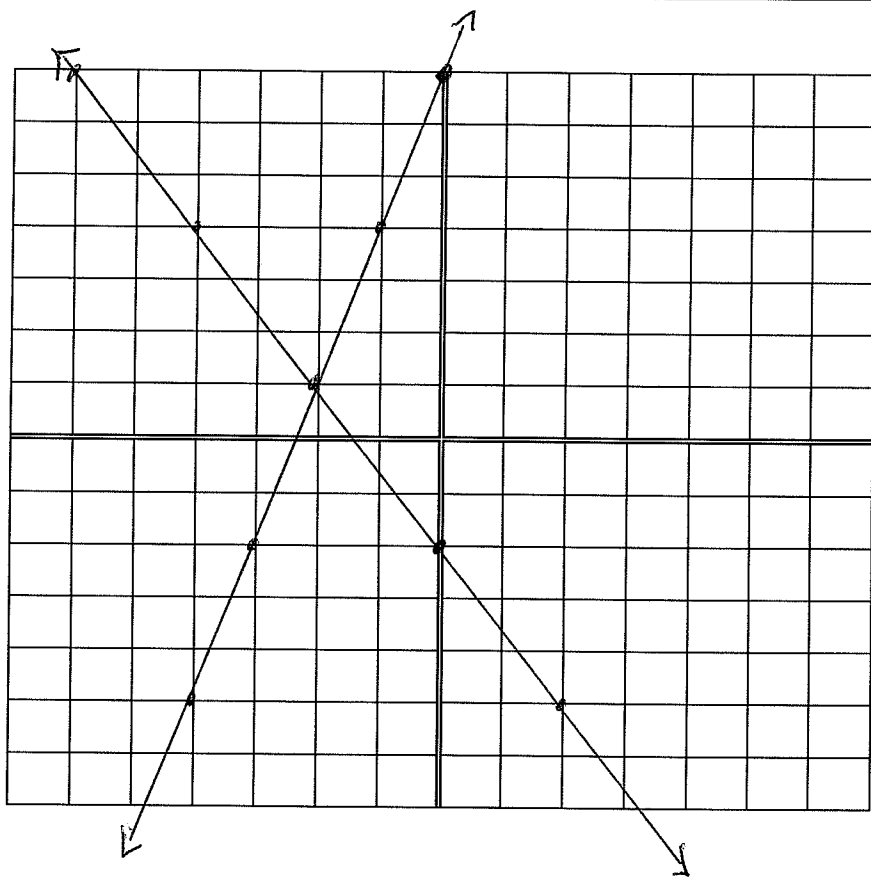
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