w2d1 p1 College Algebra

Module 2 : Linear equations

Ann: - wiki 1 today (slopes)
- test 1 Sept. 4-5th
- introduce yourself in BB.

Content: Intercepts

BB and 2 notes.

wiki: last 30 min

w2w1

2.2 linear

Ann: - No class monday

(p) review: (81%) 1) find x, y ints of $y = 4 - x^2$

(81%) 2) perpendicular line through (1, 3) to the line that goes through (3, 4) and (4, 7)

Ans: $m_0 = \frac{7-3}{4-3} = 3$ $m_\perp = \frac{-1}{3}$ $(m_0 \cdot m_\perp = -1)$

$L_\perp : y - 3 = -\frac{1}{3}(x - 1)$

W2W2

(65%) 3) Aleks: M2 Choosing a graph to fit intuitive.

(63%) 4) Your grandmas car was bought for 35,000 USD. Your family only got 18,000 USD for it. By what percent did it depreciate?

Content: Lines:

Equations for a line:

Standard form: $Ax+By=C$

pros: - Can describe any line
- easy to find x, y-ints.

cons: not unique.

Slope y-int: $y=mx+b$

pros: - in function form. ($y(x)=mx+b$)
- unique

cons: - more computation to find
- can't do vert. lines.

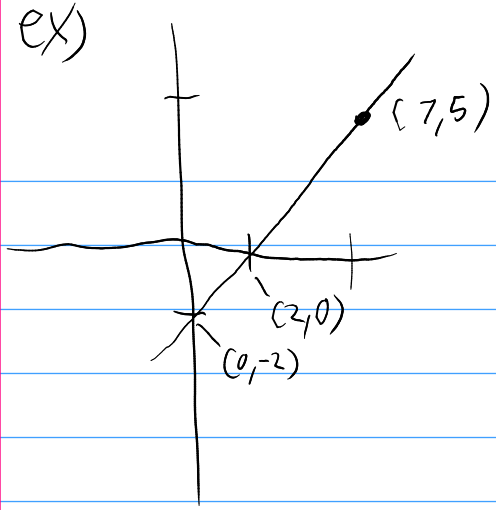
Point slope: $y-y_1=m(x-x_1)$

pros: - less computation

cons: - can't do vert. lines.

W2W3

ex)



$m = \frac{5-0}{7-2} = 1$

pt-slope: $y-5=1(x-7)$

slope int: $y=1(x-7)+5$

$=x-7+5$

$y=x-2$

Stand: $y-x=-2$

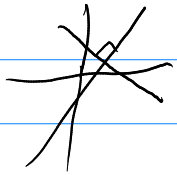
$x-y=2$

W2W4
Sec 1.4

Relations between lines

Parallel (//): Two lines are // iff they have the same slope

Perpendicular (⊥): Two lines are ⊥ if they meet at a 90° angle. Algebraically, $m_2 = \frac{-1}{m_1}$ or $-1 = m_1 \cdot m_2$.



Oblique: neither // nor ⊥.

Now
BB MZ p2-4.

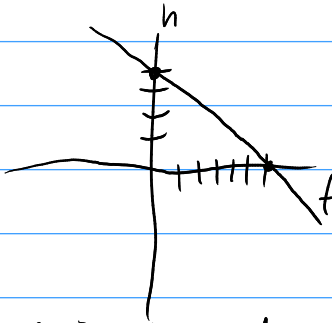
W2F1

Ann: - wiki 2 today - due Sat. morning
- Test 1 Sept. 4th + 5th

(P)review: 1) you need at least 12 crafts for a fair. you can make 2 flowers an hour and 3 hog an hour. Plot this inequality.

Ans: let f be hours on flowers, h be hours on hogs.

$$2f+3h \geq 12$$



h-int: $3h=12$, $h=4$, $(0,4)$

f-int: $2f=12$, $f=6$, $(6,0)$

(if $>$, then dashed)

2) a) Find the line through $(-3,4)$ and $(1,2)$.

work: $m=\frac{4-2}{-3-1}=\frac{2}{-4}=-\frac{1}{2}$

$y-2=-\frac{1}{2}(x-1)$

b) Find line parallel ($/\!/$) to (a) through $(1,3)$: $m_{\perp}=m_{/\!/}$

$$y-3=-\frac{1}{2}(x-1)$$

c) Perpendicular ($\perp$) to (a) through $(\pi, 700)$: $m_\perp = \frac{-1}{m_0} = -\frac{1}{-\frac{1}{2}} = 2$

$$y-700=2(x-\pi)$$

3) Finding the multiplier to give a final amount after a % ↑ or ↓.
└ use Aleks one.

Now wiki

when done – mark out group #
– work on test 1 review.
– when all groups done, practice exam style.

W3W1 (Monday Labor Day)

Ann: – Exam 1 Thurs + Friday
└ bring only: Pencil, ID
└ process: 1) put bags, phones, watches in lockers
2) get sheet from front desk
3) log in to computer (blackboard has loc.) and go to test
4) press red button for proctor to log in.

- CEA: get me a little early in case things aren't set up.
  - If TTs tell me today.
- Covers M1 + M2
  - 1h 15m time
  - 17-25 Q's + 1-3 open response

Content: Test 1 review

- first 17 as proctored.
- second 17 talk to each other
- last me going through trouble ones.