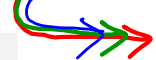Pick Up the Rotating Warm Up
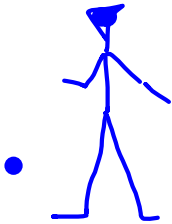
HW TALLY

Looking back on 2015

Best photos of the year 📷
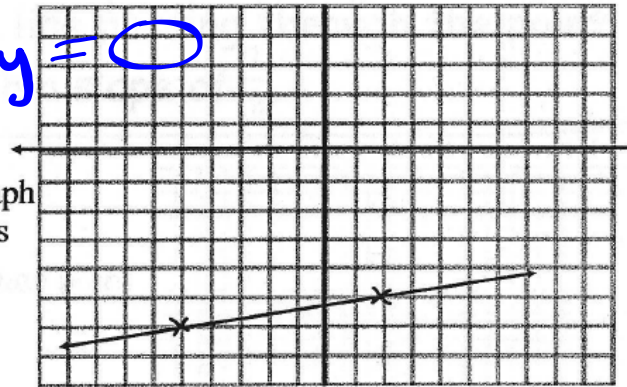
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H ①

Set y = 0

Determine the x-intercept of the graph below. It's equation is

**x - 7y = 37**

x - 7(0) = 37

x = 37

(37, 0)

( , 0)
, y=0

**(2)** Write the equation of the line that passes through

**(-4, -3) and (7, 1)**

$$M = \frac{-3-1}{-4-7}$$

$$= \frac{-4}{-11}$$

$$= \frac{4}{11}$$

$$1 = \frac{4}{11}\left(\frac{7}{1}\right) + b$$

$$1 = \frac{28}{11} + b$$

multiply by 11

$$11 = 28 + 11b$$

$$\frac{-17}{11} = \frac{11b}{11}$$

$$f - \frac{28}{11}$$

$$\frac{1(11)}{1(11)} - \frac{28}{11}$$

$$\frac{11}{11} - \frac{28}{11} = \frac{-17}{11}$$

---

**(3)** $t(n) = 3(4)^n$

0 term    multiplier

| $\underset{n=1}{12}$ | $\underset{n=2}{48}$ | $\overset{192}{\underset{n=3}{196}}$ | 768 |

**(4)** $t(n) = 4(3)^n$

$t_n =$

| $\underset{①}{12}$ | $\underset{②}{36}$ | 108 | 324 |

5. add 200  arithmetic

784, 984

6. subtract 20  arithmetic

-59, -79

7. multiply by 1/4    geometric

2.5, .625        1, 5; 20, 60, 120, 120  0

8. 120, 120, 0      neither

---

Questions  on  HW

#105 is not shown
on the solutions

**105**   $(2,0)$  $(0,-3)$

$\overbrace{\qquad\qquad}^{\text{add}}$

**find the slope**   **find y-intercept**   Write the equation

$m = \dfrac{\phantom{-}}{\phantom{-}}$

Use $(0,-3)$

$m = \dfrac{-3-0}{0-2}$   $y = \dfrac{3}{2}x + b$

$= \dfrac{-3}{-2} = \boxed{\dfrac{3}{2}}$   $y = \dfrac{3}{2}x - 3$

---

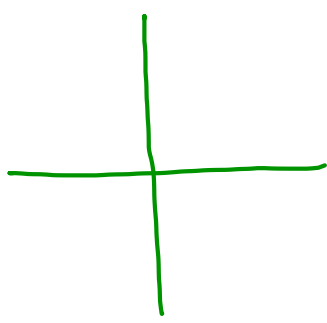**104**   $3x + 4y = 12$

| x-intercept | y-intercept | sketch |
|---|---|---|

$(x, 0)$

$3x + 4y = 12$

$3x = 12$

$x = 4$

x-int is $(4,0)$

106 a

(a) $x^2 + 3x - 3 = 0$     ← can't be factored so use Quadratic Formula

$a = 1$

$b = 3$

$c = -3$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

---

$$x = \frac{-(3) \pm \sqrt{(3)^2 - 4(1)(-3)}}{2(1)}$$

$a = 1$
$b = 3$
$c = -3$

$$x = \frac{-3 \pm \sqrt{21}}{2}$$

$$x = \frac{-3 + \sqrt{21}}{2} \approx 0.79$$

$$x = \frac{-3 - \sqrt{21}}{2} \approx -3.79$$

**106 b**

$$3x^2 - 7x = 12$$

$$3x^2 - 7x - 12 = 0$$

$a = 3$
$b = -7$
$c = -12$

$$X = \frac{-(-7) \pm \sqrt{(-7)^2 - 4(3)(-12)}}{2(3)}$$

$$X = \frac{7 \pm \sqrt{193}}{6}$$

$$X = \frac{7 + \sqrt{193}}{6} = 3.48$$
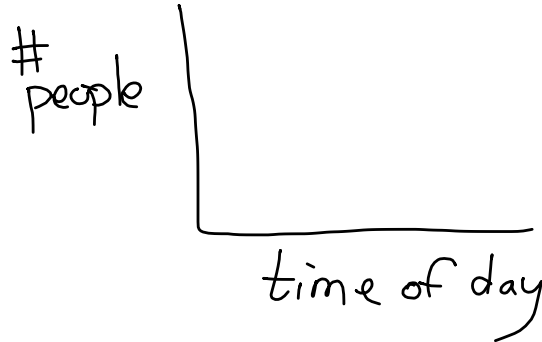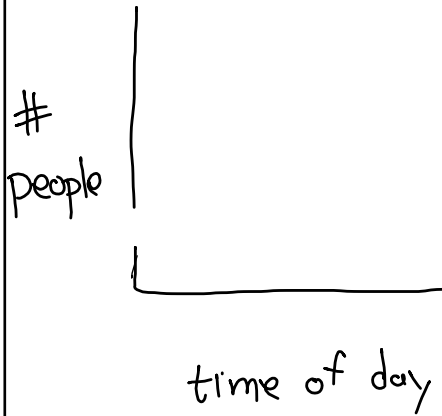
$$X = \frac{7 - \sqrt{193}}{6} = -1.15$$

---

**107**

$2.00 per 3 songs
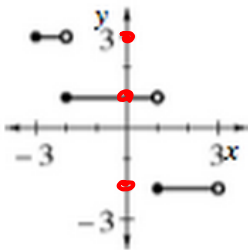
X   per 17 songs

$$\frac{\$ 2}{3} = \frac{x}{17}$$

the solution shows the final amount rounded to nearest dollar.

108 Sketch a graph showing relationship between number of people on campus and time of day.
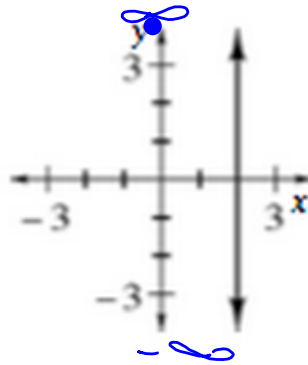
# people | 

time of day

# people | 

time of day

a.



D: $-3 \le x < 3$

Range $-2, 1, 3$

b.

109
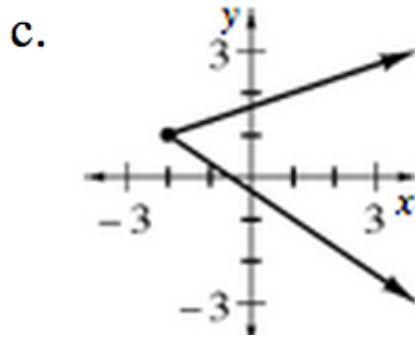


D: $x = 2$

Range $-\infty < y < \infty$

c.



D: $-2 \leq x < \infty$

Range: $-\infty < y < \infty$

11B

Check your HW

Ch. 1 Test Information

*handout*

Open your

**Analye Functions**

sheet

↩ take a minute to ↪
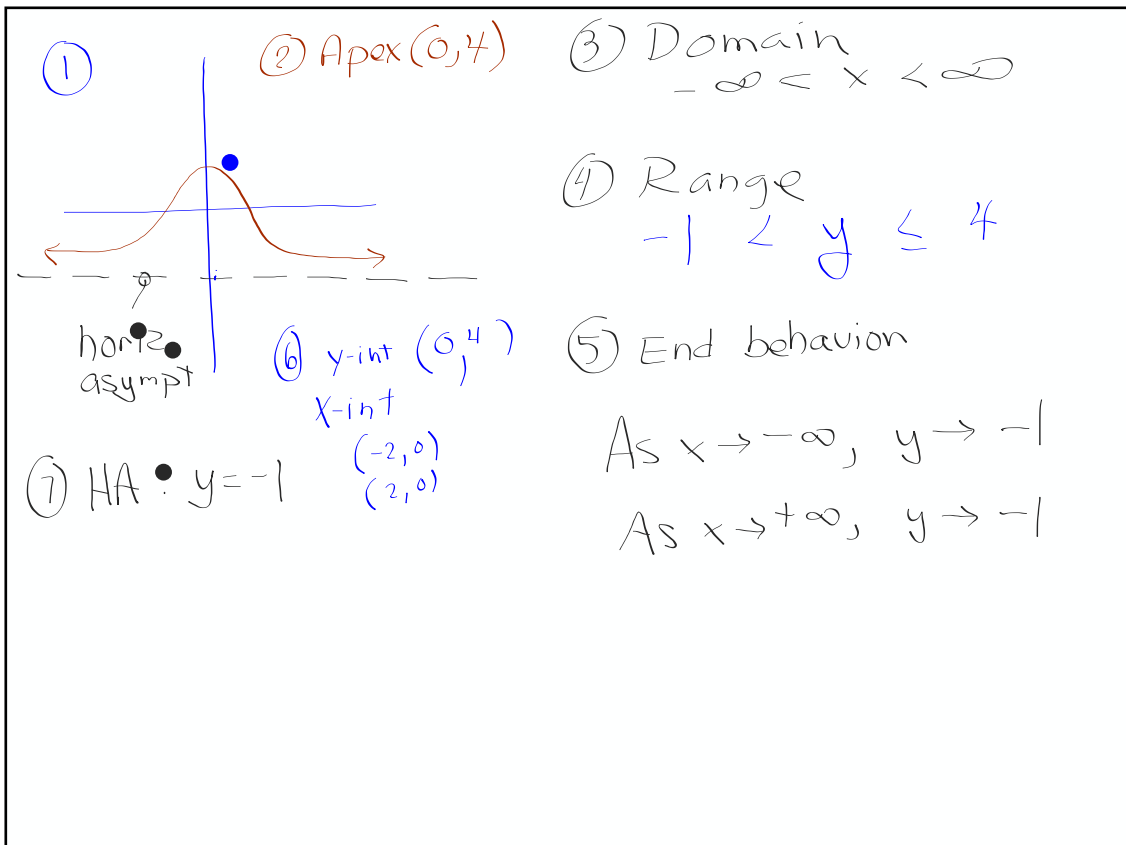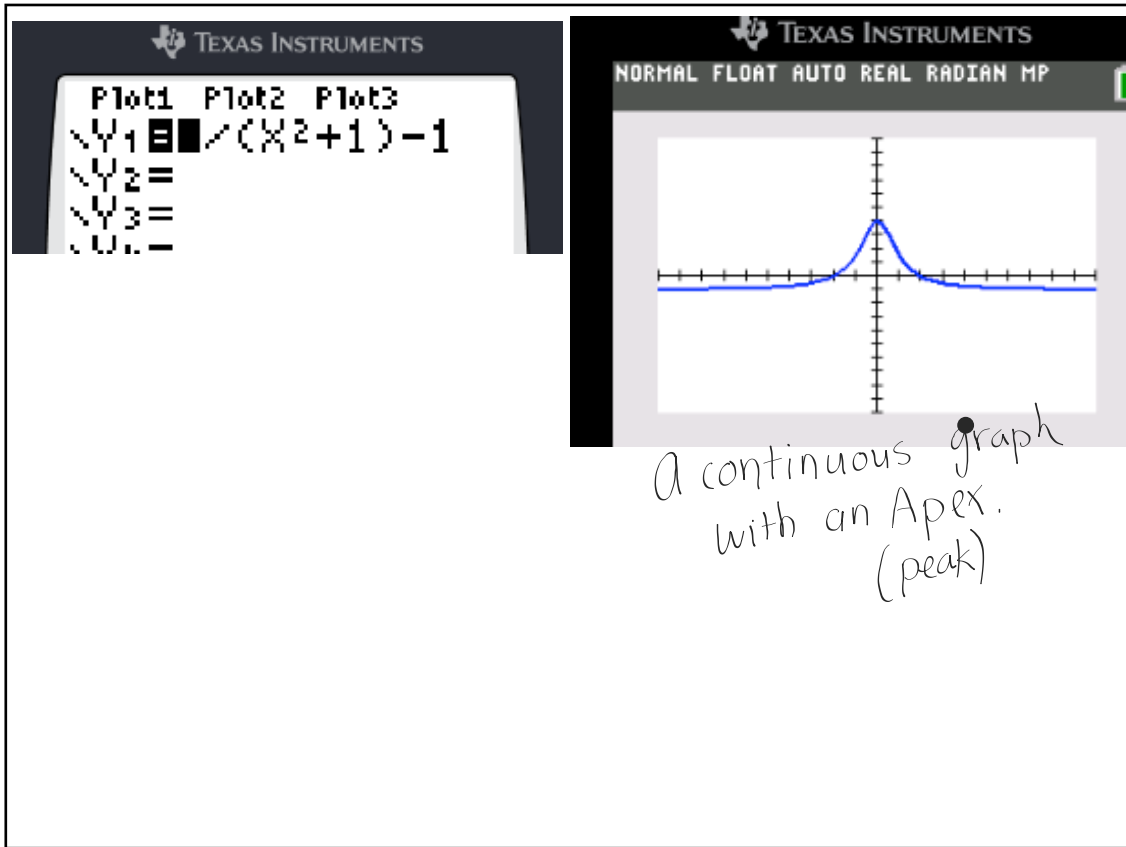review them

---

Analyze a non-typical function●

$$f(x) = \frac{5}{(x^2+1)} - 1$$

$0 = \frac{5}{x^2+1} - 1$

$0 = 5 - (x^2+1)$

$x^2 + 1 = 5$

$x^2 = 4$

Plot1  Plot2  Plot3
\Y1 ■■/(X²+1)-1
\Y2=
\Y3=

NORMAL FLOAT AUTO REAL RADIAN MP

a continuous graph
with an Apex.
(peak)

---

① 

② Apex (0,4)

③ Domain
   $-\infty < x < \infty$

④ Range
   $-1 < y \leq 4$

⑤ End behavior
   As $x \to -\infty$, $y \to -1$
   As $x \to +\infty$, $y \to -1$

horiz asympt

⑥ y-int $(0, 4)$
   x-int
   $(-2, 0)$
   $(2, 0)$

⑦ HA : $y = -1$

**B.B.**

**How to seal a bag of chips without a clip**

---

Assignment

Assignment 1.2.4
(a handout)

h