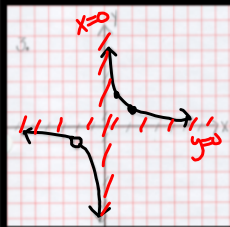
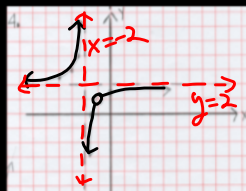


Ditto 3.1

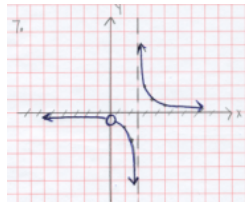
3. a. $(-2, -1)$
 b. $x=0$
 c. $y=0$
 d. none
 e. none
 f. no



4. a. $(-1, 1)$
 b. $x=-2$
 c. $y=2$
 d. $(\frac{3}{2}, 0)$
 e. $(0, \frac{3}{2})$
 f. no



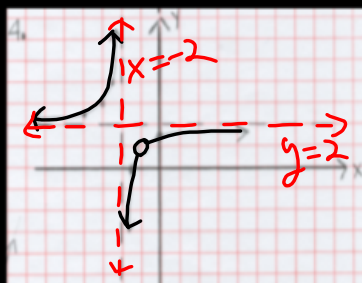
6. a. $(0, -\frac{1}{2})$
 b. $x=2$
 c. $y=0$
 d. none
 e. none
 f. no



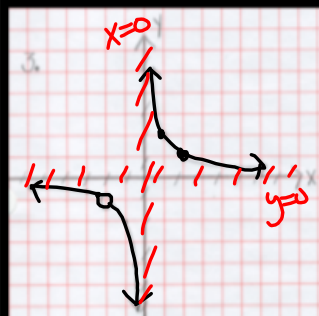
40) $P(x) = x^4 - 6x^3 + 11x^2 - 10x + 2$

Oct 31-11:53 AM

4. a. $(-1, 1)$
 b. $x=-2$
 c. $y=2$
 d. $(\frac{3}{2}, 0)$
 e. $(0, \frac{3}{2})$
 f. no



3. a. $(-2, -1)$
 b. $x=0$
 c. $y=0$
 d. none
 e. none
 f. no



$$6) y = \frac{x}{x^2 - 2x} = \frac{x}{x(x-2)} = \frac{1}{x-2}$$

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

x cancel $\rightarrow x \neq 0$

$$y = \frac{1}{0-2} = -\frac{1}{2}$$

HA $(0, -\frac{1}{2})$

$$\text{VA } x-2=0$$

$$x=2$$

$$\text{HA } x-2 \overline{) 1}$$

$$y=0$$

$$\frac{x}{x^2} \rightarrow y=0$$

$$\text{int } (y=0) \quad 0 = \frac{1}{x-2}$$

none

$$0 \neq 1$$

$$\text{y-int } (x=0) \text{ none.}$$

Cross HA

$$\text{HA} = \text{EQ}$$

$$0 = \frac{1}{x-2}$$

$$0 \neq 1$$

$$y = \frac{1}{0-2} = -\frac{1}{2}$$

But $(0, -\frac{1}{2})$
is the HA

40) $\begin{pmatrix} 2-\sqrt{3} \\ 2+\sqrt{3} \end{pmatrix}, \begin{pmatrix} 1+i \\ 1-i \end{pmatrix}$

$$ax^2 + bx + c$$

$$a = 1$$

$$b = -\text{sum} = -(2+\sqrt{3} + 2-\sqrt{3}) = -4 = b \quad \boxed{x^2 - 4x + 1}$$

$$c = \text{prod} = (2+\sqrt{3})(2-\sqrt{3}) = 4-3 = 1 = c$$

$$a = 1$$

$$b = -\text{sum} = -(1+i + 1-i) = -2 = b$$

$$c = \text{prod} = (1+i)(1-i) = 1-i^2 = 1+1 = 2 = c \quad \boxed{x^2 - 2x + 2}$$

$$P(x) = (x^2 - 4x + 1)(x^2 - 2x + 2)$$

$$P(x) = x^4 - 6x^3 + 11x^2 - 10x + 2$$

Day 8

Group Practice Day

If not completed, finish for homework.

CHANGE #3 ON NEXT SLIDE

3. Find the horizontal ~~or slant asymptote(s)~~: $f(x) = \frac{2x^2 - 3x + 1}{x^3 - 2x}$
- change this question* *ignore slant asymptotes reference or SA.*

- * Ticky*
4. Find the x and y intercepts: $f(x) = \frac{x^2 + 2x - 3}{x^2 - 2x - 15}$

Oct 22-9:13 PM

Show work for every question.

1. Find the coordinates of the hole: $f(x) = \frac{x^2 - x - 6}{x^2 + x - 12}$

Oct 22-9:12 PM

Show work for every question.

1. Find the coordinates of the hole: $f(x) = \frac{x^2 - x - 6}{x^2 + x - 12}$

$$f(x) = \frac{(x-3)(x+2)}{(x+4)(x-3)} \rightarrow f(x) = \frac{x+2}{x+4}$$
$$x-3=0$$
$$x=3$$
$$\text{Hole: } (3, 5/7)$$
$$f(3) = \frac{3+2}{3+4}$$
$$= \frac{5}{7}$$

Oct 22-9:12 PM

2. Find the vertical asymptote(s): $f(x) = \frac{x^2 + x - 6}{2x^2 + x - 3}$

Oct 22-9:12 PM

2. Find the vertical asymptote(s): $f(x) = \frac{x^2 + x - 6}{2x^2 + x - 3}$

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

no hole.

VA den = 0

$$2x+3=0 \quad x-1=0$$

$$x = -\frac{3}{2} \quad x = 1$$

Oct 22-9:12 PM

3. Find the horizontal ~~or slant~~ asymptote(s): $f(x) = \frac{2x^2 - 3x + 1}{x^3 - 2x}$

change
+ this
question

4. ^{Tricky} Find the x and y intercepts: $f(x) = \frac{x^2 + 2x - 3}{x^2 - 2x - 15}$

Oct 22-9:13 PM

3. Find the horizontal or slant asymptote(s): $f(x) = \frac{2x^2 - 3x + 1}{x^3 - 2x}$

change
this
question

$$n^{\circ} < d^{\circ}$$

$$y = 0$$

or $\frac{2x^2}{x^3} \rightarrow \text{can't } \div$
 $y = 0$

4. Find the x and y intercepts: $f(x) = \frac{x^2 + 2x - 3}{x^2 - 2x - 15}$

$$f(x) = \frac{(x+3)(x-1)}{(x+3)(x-5)} \rightarrow f(x) = \frac{x-1}{x-5}$$

hole at $x = -3$,
so no x-intercept
there!

x-int: num = 0
 $(1, 0)$ $x - 1 = 0$
 $x = 1$

y-int
 $y = \frac{0-1}{0-5}$
 $y = \frac{1}{5}$
 $(0, \frac{1}{5})$

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5. Graph and analyze: $y = \frac{x^2 - 4}{x^2 + 5x + 6}$ (show all work in the space provided)

hole: _____

VA: _____

HA/SA: _____

x-intercept(s): _____ y-intercept: _____

Oct 22-9:14 PM

5. Graph and analyze: $y = \frac{x^2 - 4}{x^2 + 5x + 6}$ (show all work in the space provided)

hole: $(-2, -4)$ $y = \frac{(x+2)(x-2)}{(x+2)(x+3)} \rightarrow y = \frac{x-2}{x+3}$
 $x = -2$ $y = \frac{-2-2}{-2+3} = -4$

VA: $x = -3$ HA/SA: $y = 1$

den = 0
 $x + 3 = 0$

$n^{\circ} = d^{\circ}$
 $y = 1$

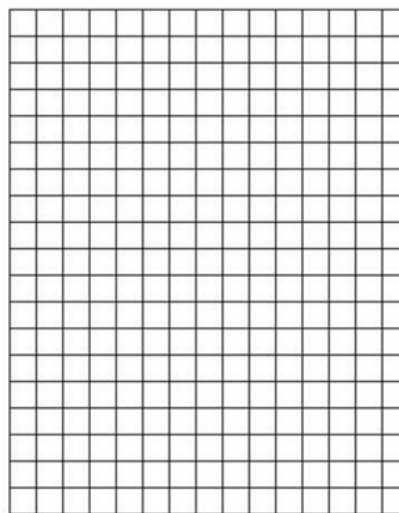
x-intercept(s): $(2, 0)$ y-intercept: $(0, -\frac{2}{3})$

num = 0
 $x - 2 = 0$
 $x = 2$

$y = \frac{x-2}{x+3}$
 $y = \frac{0-2}{0+3}$
 $y = -\frac{2}{3}$

Oct 22-9:14 PM

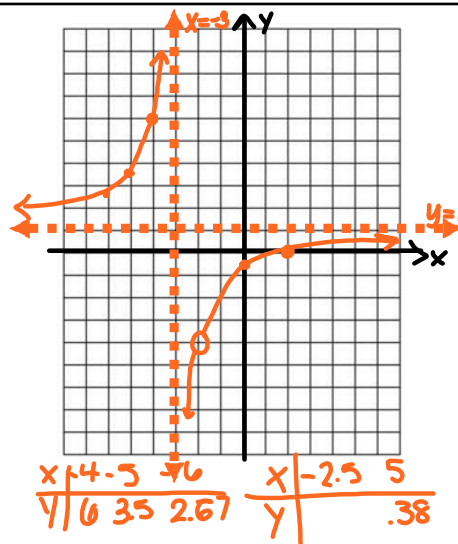
Tables:



Oct 22-9:15 PM

Tables:

$$f(x) = \frac{x-2}{x+3}$$



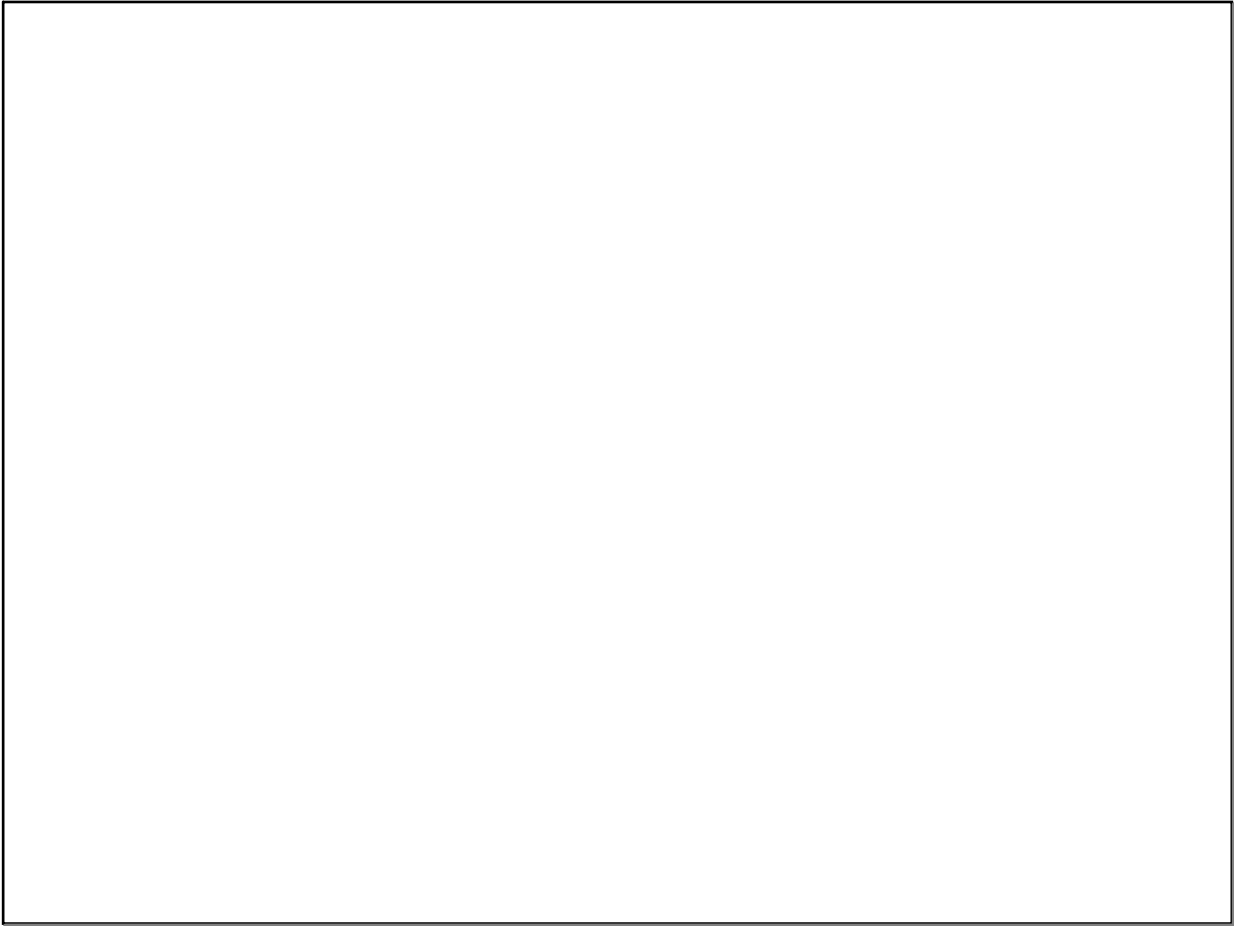
Oct 22-9:15 PM

HW 3-8

Finish Groupwork & pg 302 #39

If not completed, finish for homework

Oct 3-10:19 AM



Nov 1-9:05 PM