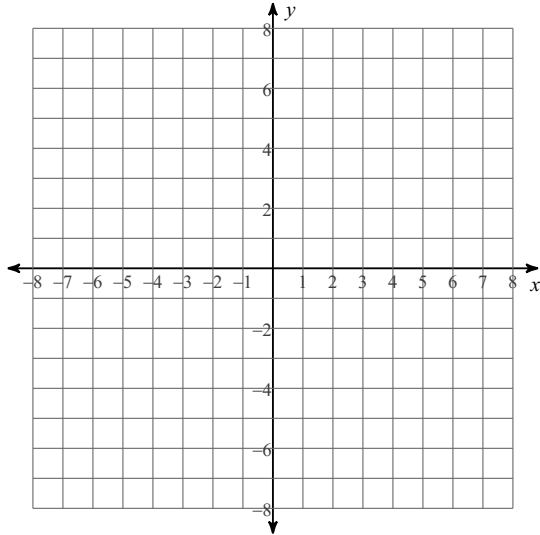


SM3 HW #3-7 (Oblique Asymptote)

Period _____

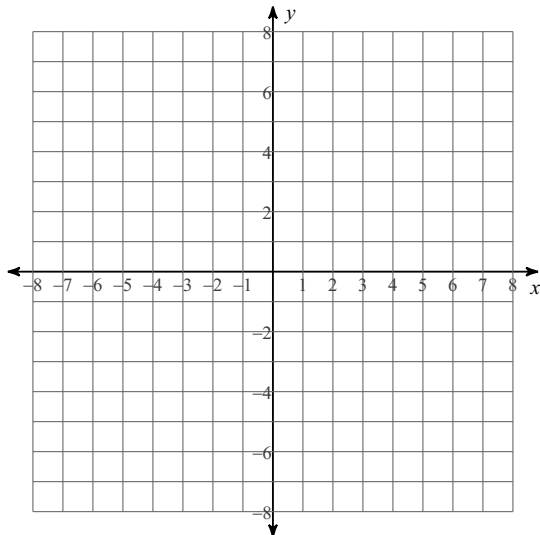
1) $y = \frac{x^2 - 4}{3x - 9}$

- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.



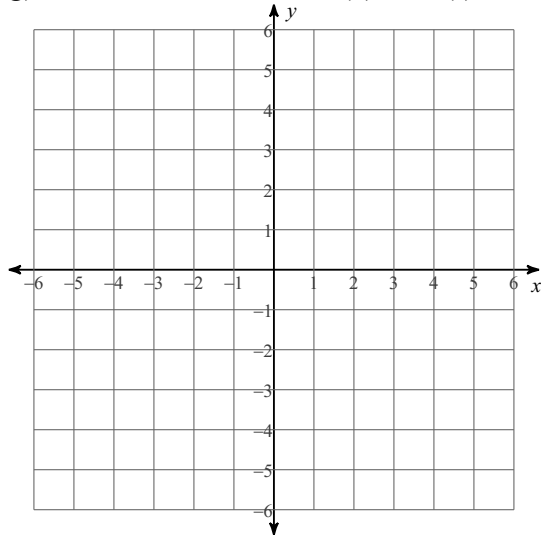
2) $y = \frac{x^3 - 3x^2 + 2x}{4x^2 - 16x}$

- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.



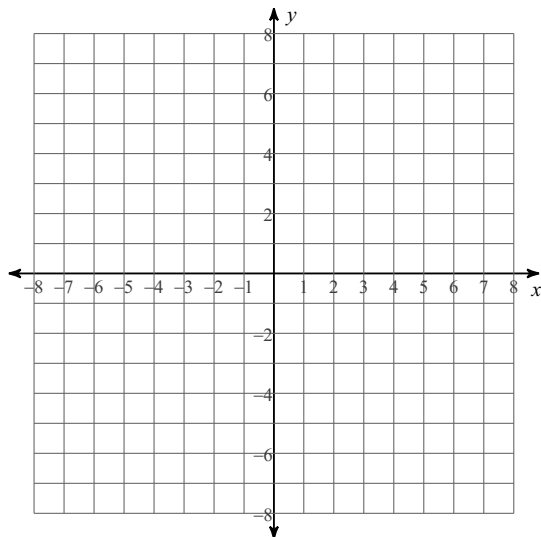
$$3) y = \frac{x^3 - x}{-4x^2 + 16}$$

- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.



$$4) y = \frac{x^2 - x - 6}{3x - 6}$$

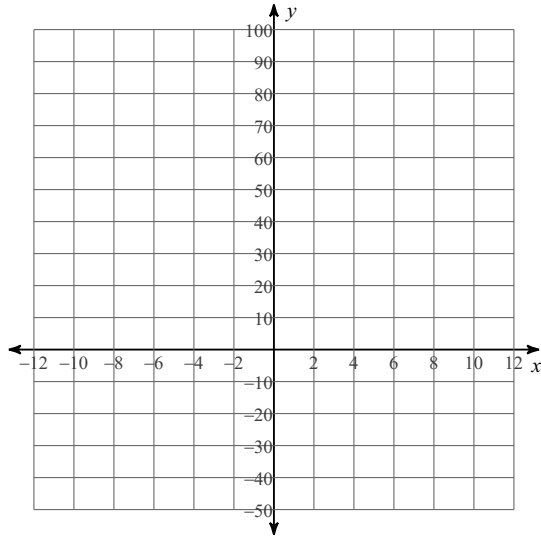
- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.



$$5) y = \frac{x^3 - x^2 - 4x + 4}{x + 3}$$

- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.

$$y = \frac{x^3 - x^2 - 4x + 4}{x + 3}$$



$$6) y = \frac{x^2 + 5x - 14}{x - 1}$$

- Rewrite the equation in simplified/factored form
- Where is the hole (if any)
- What is the equation of the vertical asymptote?
- What are the x-intercepts
- Write the equation of the non-vertical asymptote.
- What is the y-intercept?
- Use the information in (a) thru (f) to draw the graph.

