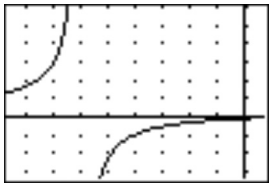
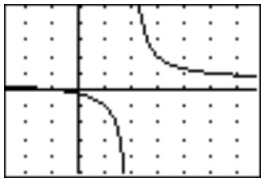
SECTION 6.1

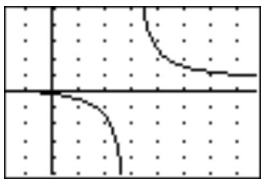
1. Classify $y = 5x^2$ as linear, rational, or neither. Explain your choice.
2. Classify $y = \dfrac{2x - 3}{x + 4}$ as linear, rational, or neither. Explain your choice.
3. Classify $y = \dfrac{1}{3}x + \dfrac{1}{2}$ as linear, rational, or neither. Explain your choice.
4. Classify $y = \dfrac{x + 2}{6x - 5}$ as linear, rational, or neither. Explain your choice.
5. Classify $y = x^3 + 2x^2 - x + 4$ as linear, rational, or neither. Explain your choice.
6. Classify $y = \dfrac{3x + 5}{6}$ as linear, rational, or neither. Explain your choice.
7. Give the vertical asymptote (if any) of $y = \dfrac{2x - 5}{x + 2}$.
8. Give the vertical asymptote (if any) of $y = \dfrac{2}{x - 3}$.
9. Give the vertical asymptote (if any) of $y = \dfrac{x - 1}{3x}$.
10. Give the vertical asymptote (if any) of $y = \dfrac{-5}{3x + 2}$.
11. Give the vertical asymptote (if any) of $y = \dfrac{2x}{4x - 5}$.
12. Give the vertical asymptote (if any) of $y = \dfrac{2x^2}{2x + 1}$.
13. Give the equation of any vertical asymptotes. The scale on the x-axis is one.



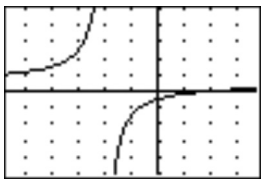
14. Give the equation of any vertical asymptotes. The scale on the x-axis is one.



15. Give the equation of any vertical asymptotes. The scale on the x-axis is one.

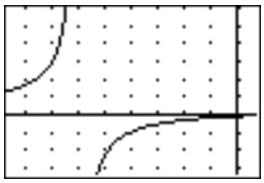


16. Give the equation of any vertical asymptotes. The scale on the x-axis is one.



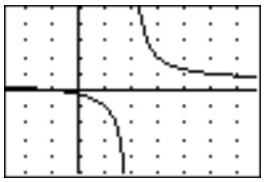
Match each graph with the correct equation at right. The scale on the x-axis is one.

17.



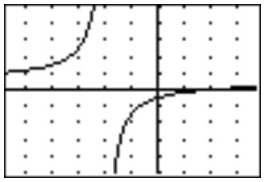
A. $y = \dfrac{x-4}{x-3}$

18.



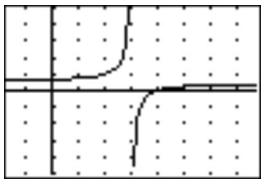
B. $y = \dfrac{x-2}{x+2}$

19.



C. $y = \dfrac{x+1}{x-2}$

20.



D. $y = \dfrac{x+2}{x+6}$