SM3 Name_____



# 5.2 Standard Form of Rational Functions

Period____

**Identify the holes, vertical asymptotes, and horizontal asymptote (End Behavior) of each.**

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

2) $f(x) = \frac{4}{x}$

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

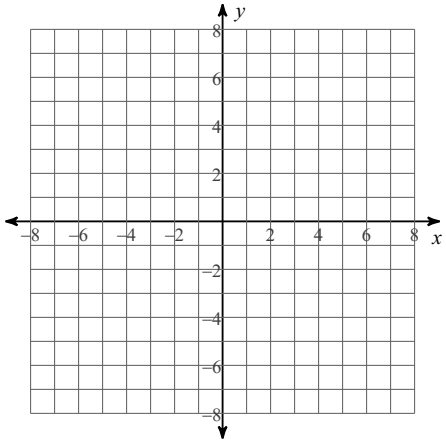
4) $f(x) = -\frac{4}{x-2} - 2$

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

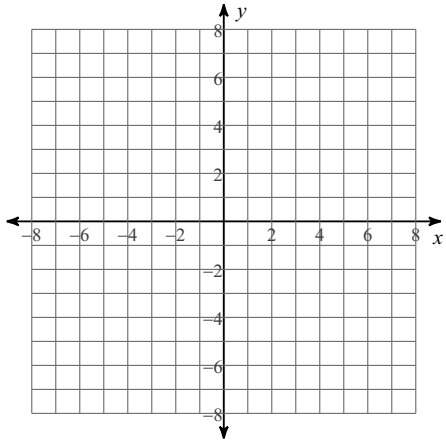
6) $f(x) = -\frac{3}{x} + 1$

**Graph each function.**

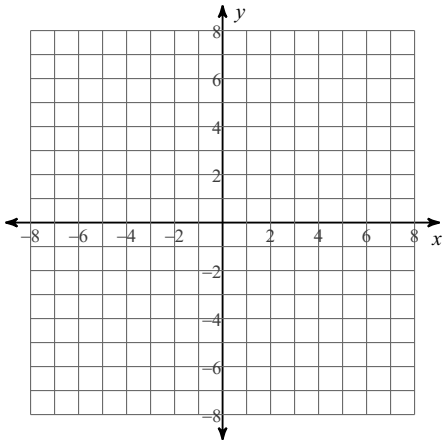
7) $f(x) = \frac{4}{x} - 1$



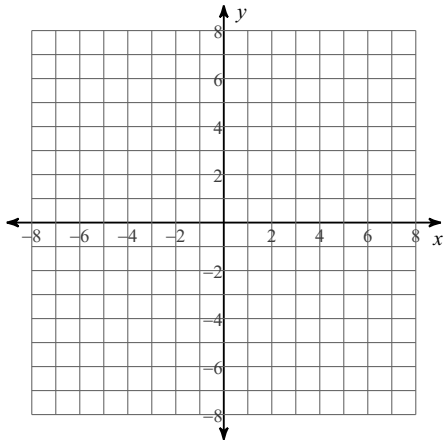

8) $f(x) = -\frac{2}{x-2} - 3$



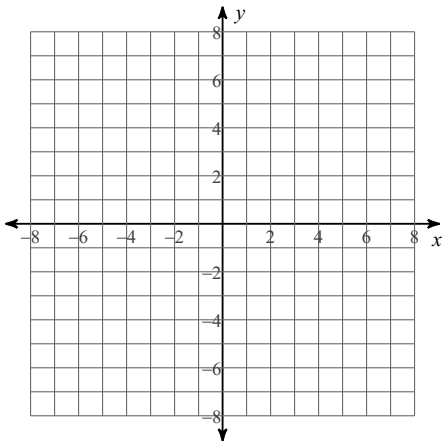

9) $f(x) = -\frac{2}{x+3} - 1$



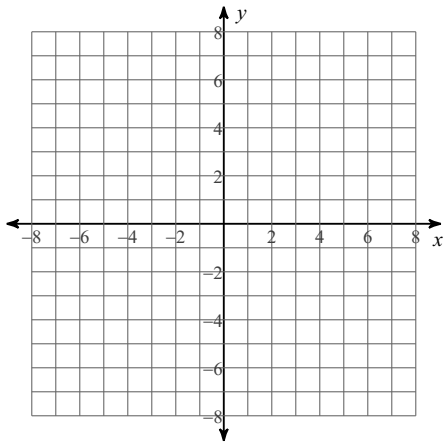

10) $f(x) = \frac{3}{x}$



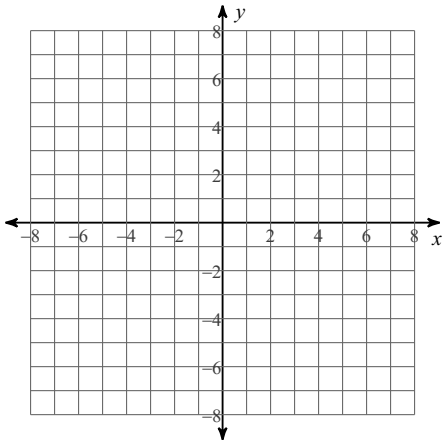
11) $f(x) = \dfrac{3}{x+1} - 2$



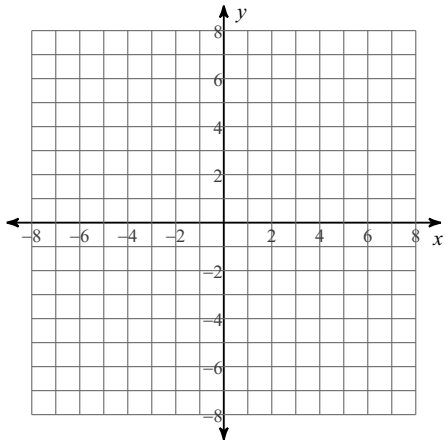

12) $f(x) = \dfrac{1}{x-1} - 1$



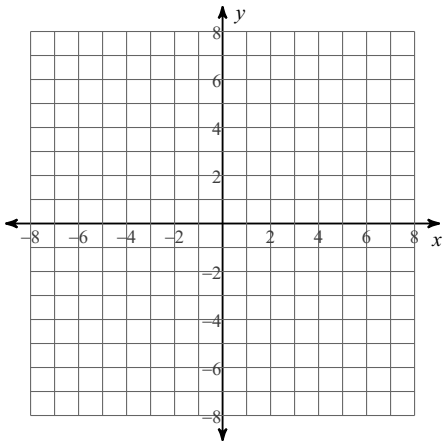

13) $f(x) = -\dfrac{1}{x-3} - 3$



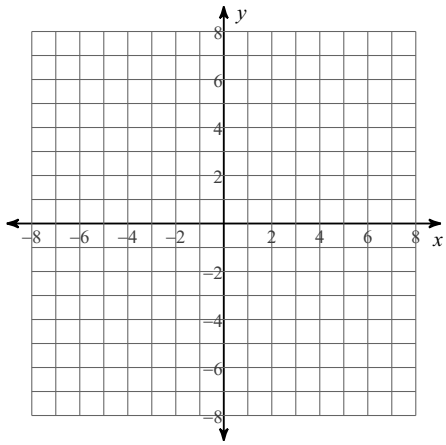

14) $f(x) = \dfrac{4}{x-2} + 1$




15) $f(x) = \dfrac{4}{x+1} - 1$

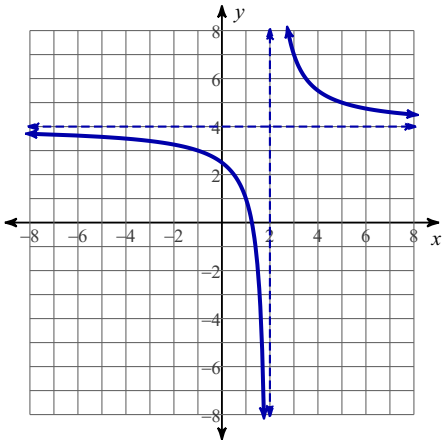



16) $f(x) = -\dfrac{1}{x-3}$

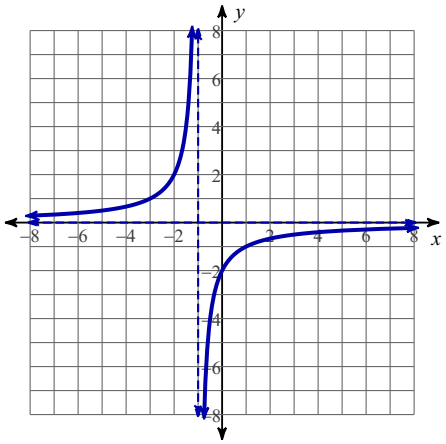


**Write the equation for each graph in standard form $y = \frac{a}{x - h} + k$.**

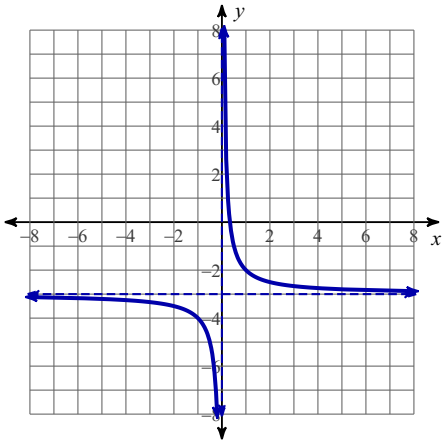
17)



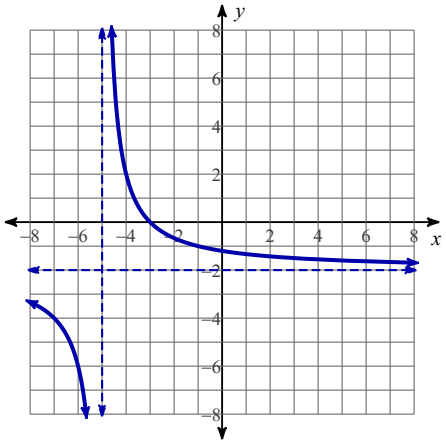
18)



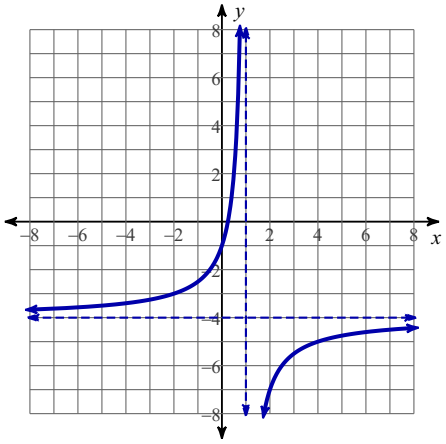
19)



20)



21)



22)