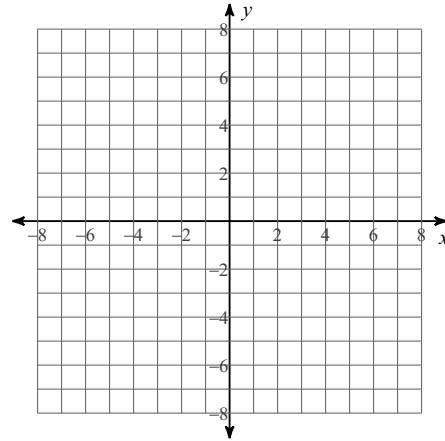
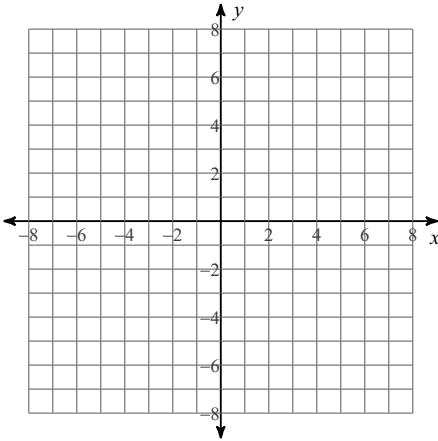


Practice Quiz 11.1-11.4 No Calculator!

Identify the vertical and horizontal asymptotes of each. Then sketch the graph by making a table of values. Identify the domain and range.

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

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



Simplify each and state the excluded values.

3)  $\frac{12r^2}{6r}$

4)  $\frac{48r^2s^2t}{64rs^4t}$

5)  $\frac{6}{4m+20}$

6)  $\frac{35b^2 - 63b}{49b}$

7)  $\frac{x^2 + 2x - 15}{x^2 - 6x + 9}$

8)  $\frac{70p + 20}{30p - 50}$

9)  $\frac{a^2 - 5a + 4}{a^3 + 7a^2 - 8a}$

10)  $\frac{3 - n}{3n^2 - 11n + 6}$

**Simplify each expression.**

11)  $\frac{4n}{2} \cdot \frac{5}{9n}$

12)  $\frac{3m}{7m^4} \cdot \frac{9m^2}{5m}$

13)  $\frac{(a - 8)(a + 7)}{6a} \cdot \frac{3a(a - 4)}{(a + 7)(a - 4)}$

14)  $\frac{2(5v + 8)}{3} \cdot \frac{1}{8v(5v + 8)}$

15)  $\frac{7n}{n - 8} \cdot \frac{10n^3 - 80n^2}{10n^2}$

16)  $\frac{m^2 - 5m + 6}{m - 3} \cdot \frac{1}{m - 3}$

17)  $\frac{v + 2}{v^2 + 13v + 42} \div \frac{3 - v}{v^2 + 3v - 18}$

18)  $\frac{1}{b + 9} \div \frac{b + 10}{b^2 - 81}$

19) Write an inverse variation equation that relates  $x$  and  $y$  if  $y$  varies inversely as  $x$  and  $y = 4$  when  $x = 12$ . Find  $y$  when  $x = -16$

20) Determine whether  $4x = \frac{5}{y}$  is an example of direct or inverse variation. Justify your response.