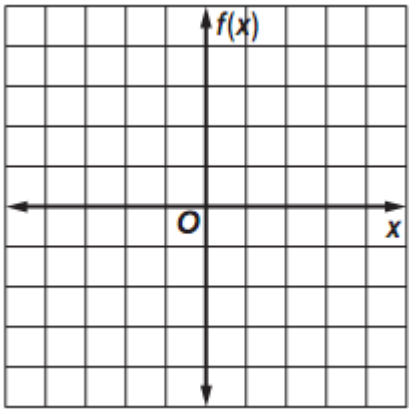
Unit 13 - Review **Name:**

Determine the equation of any vertical asymptotes and the values of x for any holes in the graph. Then graph the function.

Vertical asymptote(s): _____

Hole(s): _____

1. $$f(x) = \frac{x - 1}{x^2 - 4x + 3}$$



State whether the each equation represents *direct, joint, or inverse* variation. Then name the constant of variation.

2. $$p = \frac{4}{q}$$

3. $$rw = 15$$

4. $$t = 16rh$$

Find the value of each.

5. If y varies directly as x and $y = 35$ when $x = 7$, find y when $x = 11$.

6. If y varies jointly as x and z and $y = 18$ when $x = 2$ and $z = 3$, find y when $x = 5$ and $z = 6$.

7. If y varies inversely as x and $y = 3$ when $x = 14$, find x when $y = 6$.

Find each value.

1. If y varies directly as x and $y = 9$ when $x = 6$, find y when $x = 8$.

2. If y varies directly as x and $y = 16$ when $x = 36$, find y when $x = 54$.

3. If y varies directly as x and $x = 15$ when $y = 5$, find x when $y = 9$.

4. If y varies directly as x and $x = 33$ when $y = 22$, find x when $y = 32$.

5. Suppose y varies jointly as x and z. Find y when $x = 5$ and $z = 3$, if $y = 18$ when $x = 3$ and $z = 2$.

6. Suppose y varies jointly as x and z. Find y when $x = 6$ and $z = 8$, if $y = 6$ when $x = 4$ and $z = 2$.

7. Suppose y varies jointly as x and z. Find y when $x = 4$ and $z = 11$, if $y = 60$ when $x = 3$ and $z = 5$.

8. Suppose y varies jointly as x and z. Find y when $x = 5$ and $z = 2$, if $y = 84$ when $x = 4$ and $z = 7$.

State whether each equation represents a *direct*, *joint*, or *inverse* variation. Then name the constant of variation.

1. $c = 12m$

2. $p = \frac{4}{q}$

3. $A = \frac{1}{2}bh$

4. $rw = 15$

5. $y = 2rst$

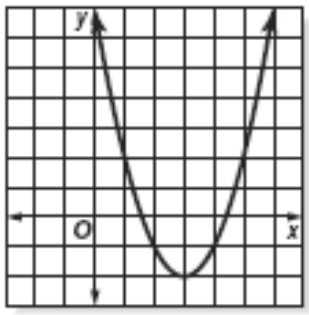
6. $f = 5280m$

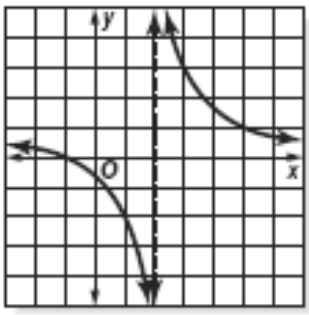
7. $y = 0.2s$

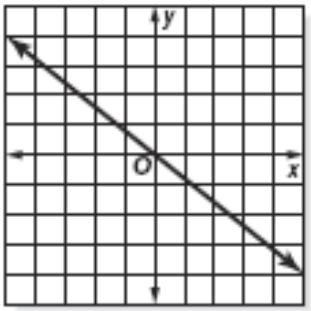
8. $vz = -25$

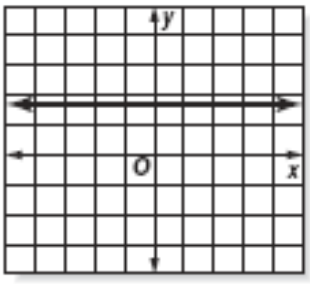
9. $t = 16rh$

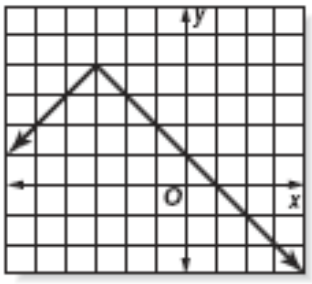
Identify the function represented by each graph.

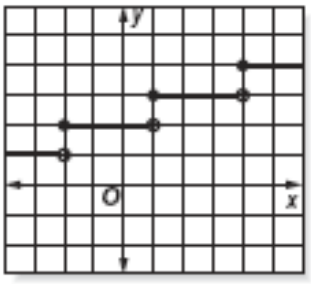
1. 

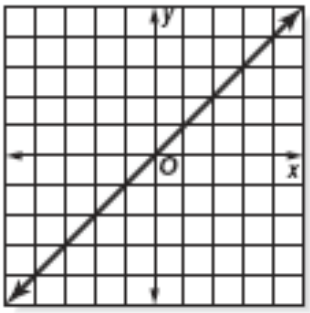
2. 

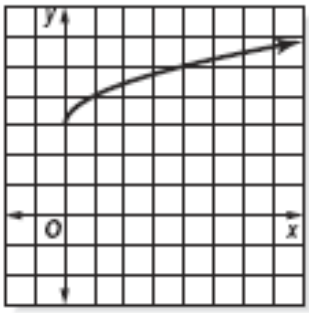
3. 

4. 

5. 

6. 

7. 

8. 

9.