

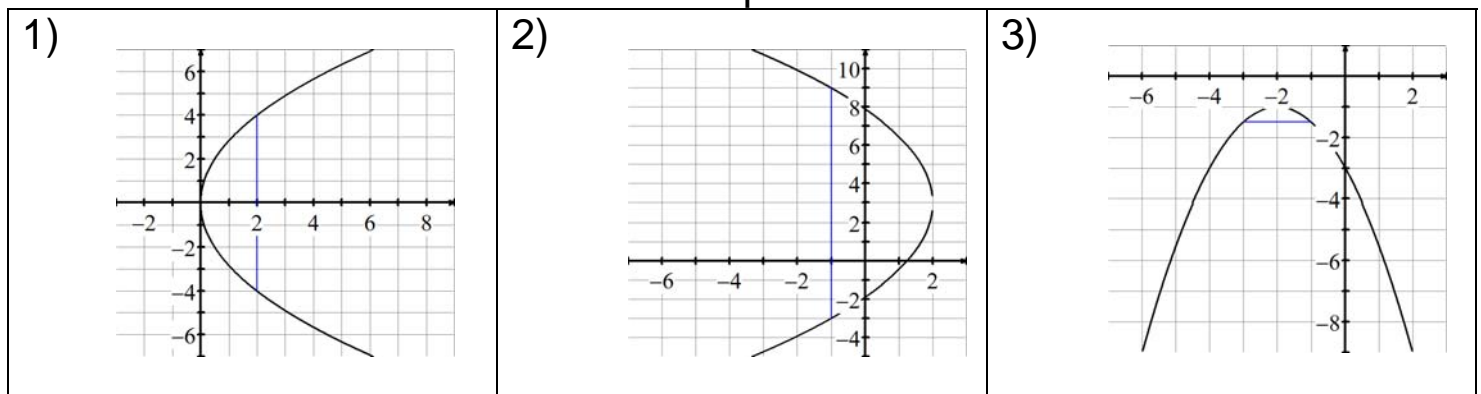
## Parabolas

There are **26** points possible

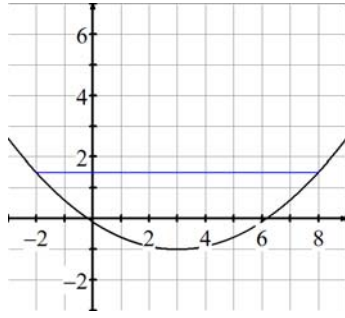
For #1 - 7, count each ROW as 1 point, and count each graph as 1 point  
For #8 - 19, count each equation as 1 point.

Prob.	Vertex	Focus	Axis	Directrix
1)	(0,0)	(2,0)	$y = 0$	$x = -2$
2)	(2,3)	(-1,3)	$y = 3$	$x = 5$
3)	(-2,-1)	(-2,-1.5)	$x = -2$	$y = -0.5$
4)	(3,-1)	(3,1.5)	$x = 3$	$y = -3.5$
5)	(1.5,1)	(4.5,1)	$y = 1$	$x = -1.5$
6)	(-2,2.5)	(-2,1.5)	$x = -2$	$y = 3.5$
7)	(2.5,4)	(0.5,4)	$y = 4$	$x = 4.5$
8) $(x - 2)^2 = 8(y - 4)$		9) $(y + 1)^2 = -16(x - 1)$		
10) $(y + 2)^2 = 8(x + 1)$		11) $(x + 2)^2 = 6(y + 0.5)$		
12) $(y - 1)^2 = 8(x + 5)$		13) $\frac{(x + 1)^2}{64} + \frac{(y - 1)^2}{48} = 1$		
14) $\frac{(x - 2)^2}{9} - \frac{(y - 3)^2}{40} = 1$		15) $(y - 1)^2 = -4(x - 2)$		
16) $\frac{(x + 4)^2}{51} + \frac{(y - 7)^2}{100} = 1$		17) $(x + 2)^2 + (y - 1)^2 = 50$		
18) $\frac{(y + 1)^2}{16} - \frac{(x + 2)^2}{20} = 1$		19) $\frac{(x - 3)^2}{49} + \frac{(y - 4)^2}{13} = 1$		

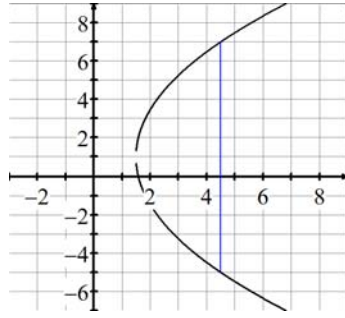
### Graphs



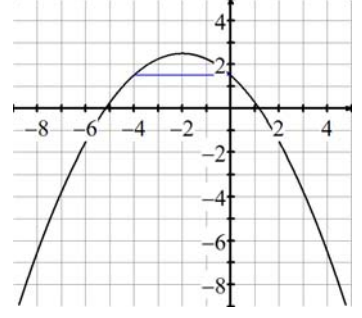
4)



5)



6)



7)

