Name _____   Date _____
Mr. Schlansky   Algebra II

Given Equation of a Parabola

Find the vertex and p value of the parabolas below

1. $y = \frac{1}{12}(x-5)^2 - 1$

2. $y = \frac{1}{8}(x+3)^2 - 4$

3. $y = -\frac{1}{16}(x+9)^2 - 8$

4. $y = \frac{1}{4}(x+9)^2 - 3$

5. $y = -\frac{1}{12}(x-7)^2 + 1$

6. $y = \frac{1}{20}x^2 + 5$

7. $12(y+2) = (x+3)^2$

8. $-4(y+1) = (x-2)^2$

9. $24(y+1) = (x-7)^2$

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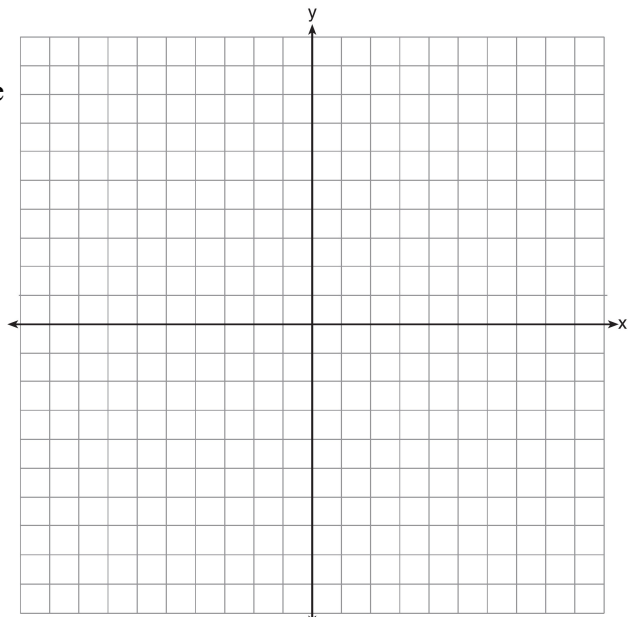
11. $y = \frac{1}{4}(x+1)^2 + 2$

12. $(x-2)^2 = 16(y-1)$
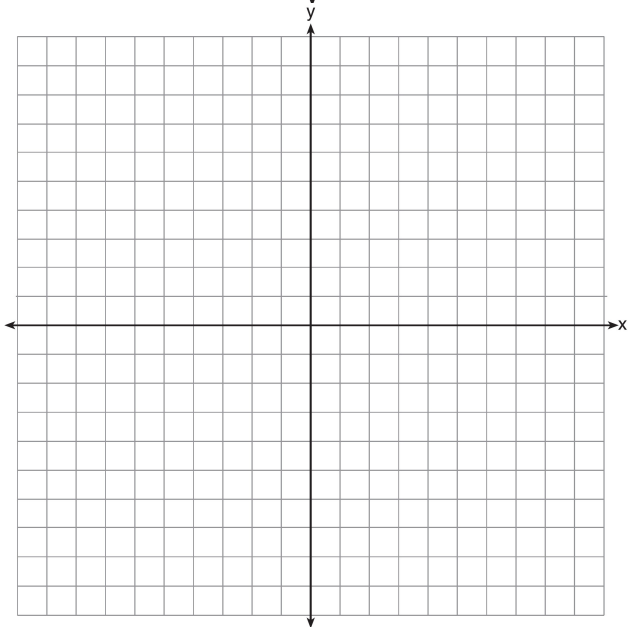
13. $-6(y+1) = (x-7)^2$

14. $y = -\frac{1}{8}(x+9)^2 - 1$
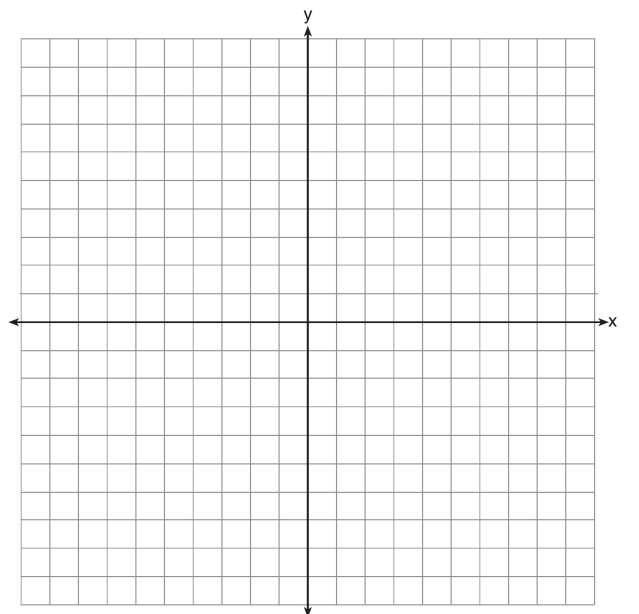
15. $y = -\frac{1}{16}(x+7)^2 - 2$

16. The equation of a parabola is $y=-\dfrac{1}{16}(x+5)^2+1$. If the focus is $(-5,-3)$, what is the equation of the directrix?
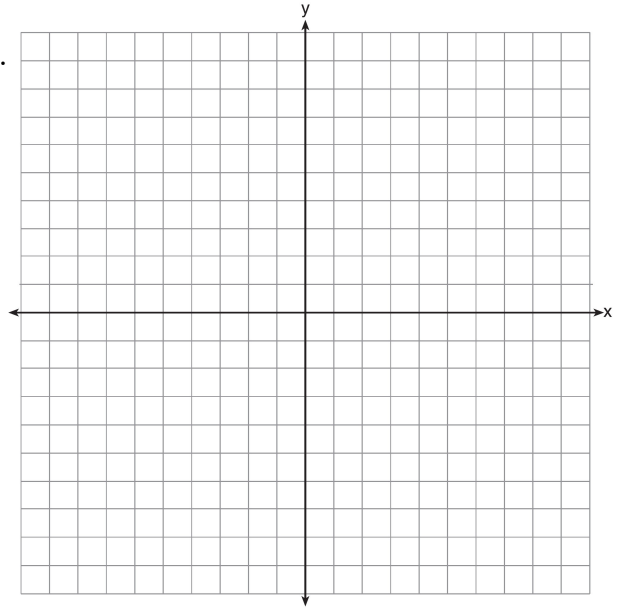
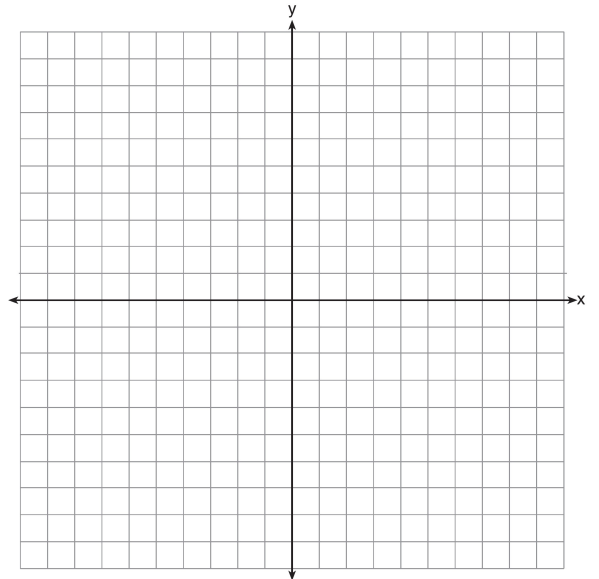17. The parabola described by the equation $y=\dfrac{1}{12}(x-2)^2+2$ has the directrix at $y=-1$. What is the focus?

18. The directrix of the parabola $12(y+3)=(x-4)^2$ has the equation $y=-6$. Find the coordinates of the focus of the parabola.

19. The parabola $y = -\dfrac{1}{20}(x-3)^2 + 6$ has its focus at $(3, 1)$. Determine and state the equation of the directrix.
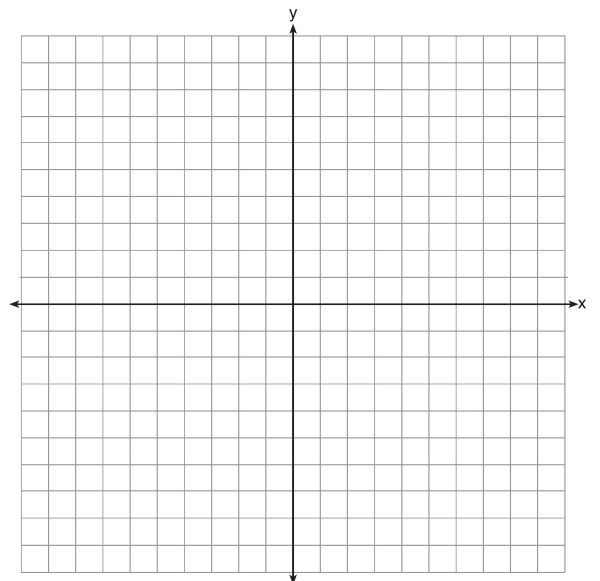
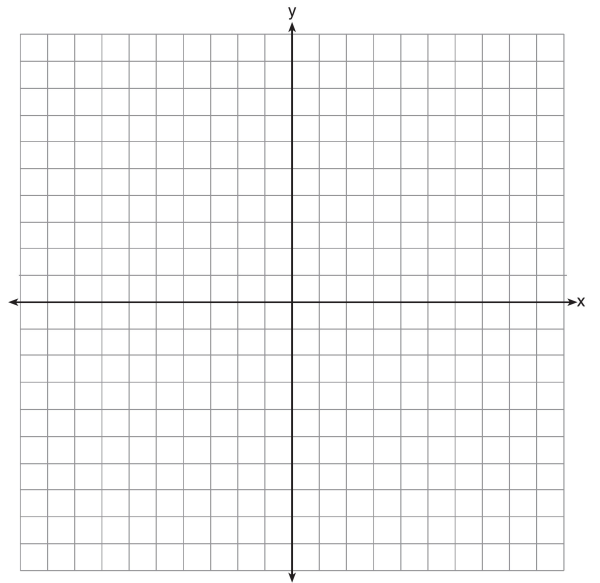20. The parabola $y = -\dfrac{1}{20}(x-4)^2 + 2$ has a directrix at $y = 7$. What is the focus?

21. The parabola $y = -\dfrac{1}{4}(x+3)^2 - 6$ has a directrix at $y = -5$. What is the focus?
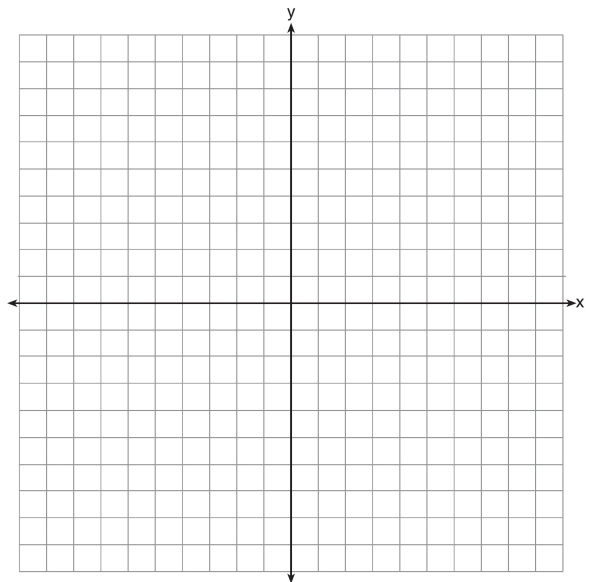   24.

22. What is the focus and directrix of $y=\dfrac{1}{12}(x-5)^2+2$?

23. What is the equation of the directrix for the parabola $-8(y-3)=(x+4)^2$?

24. The parabola $8(y-3)=(x-2)^2$ has a focus of $(2,1)$. What is the equation of the directrix?