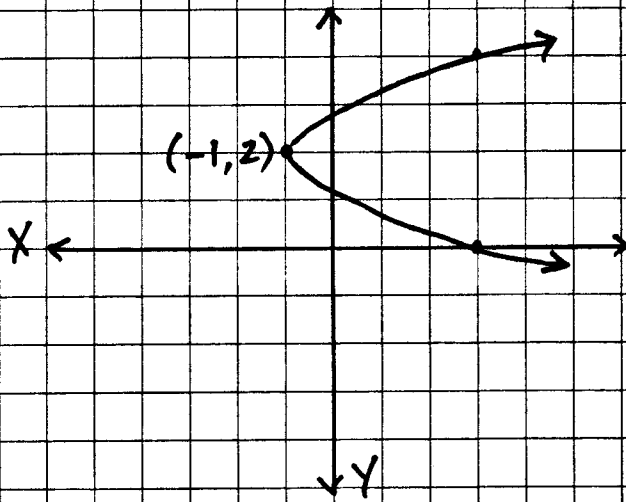


PARABOLAS

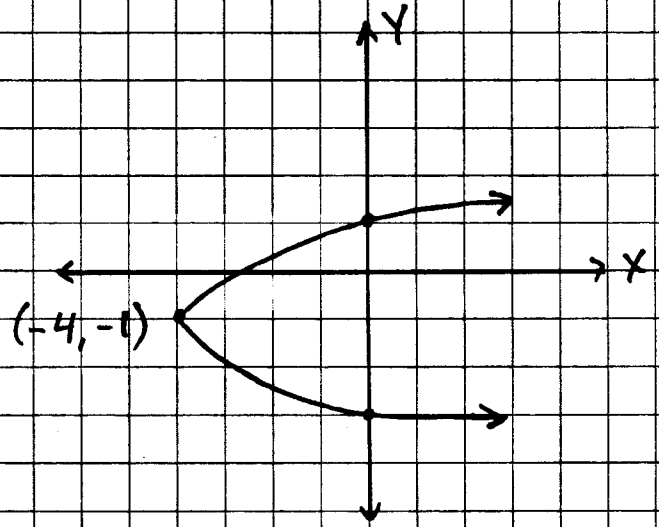
1. $X = (y-2)^2 - 1$



Focus $(-3/4, 2)$

Directrix: $X = -5/4$

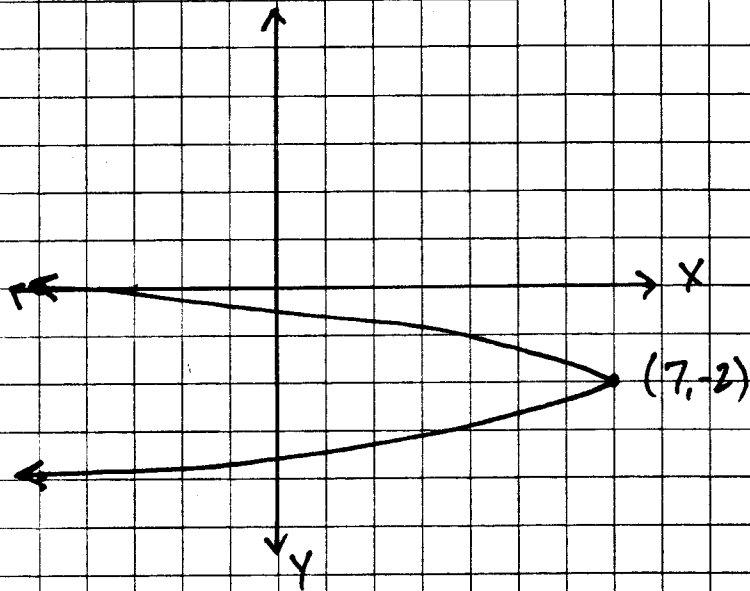
2. $X = (y+1)^2 - 4$



Focus $(-33/4, -1)$

Directrix: $X = -4\frac{1}{4}$

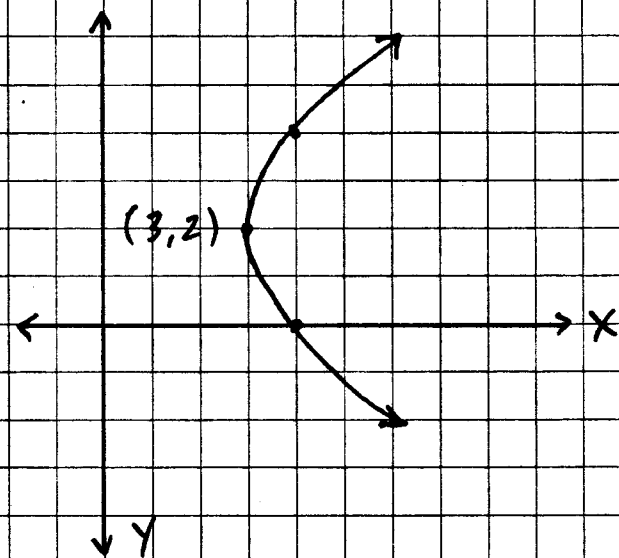
3. $X = -3(y+2)^2 + 7$



Focus $(6\frac{11}{12}, -2)$

Directrix: $X = 7\frac{1}{12}$

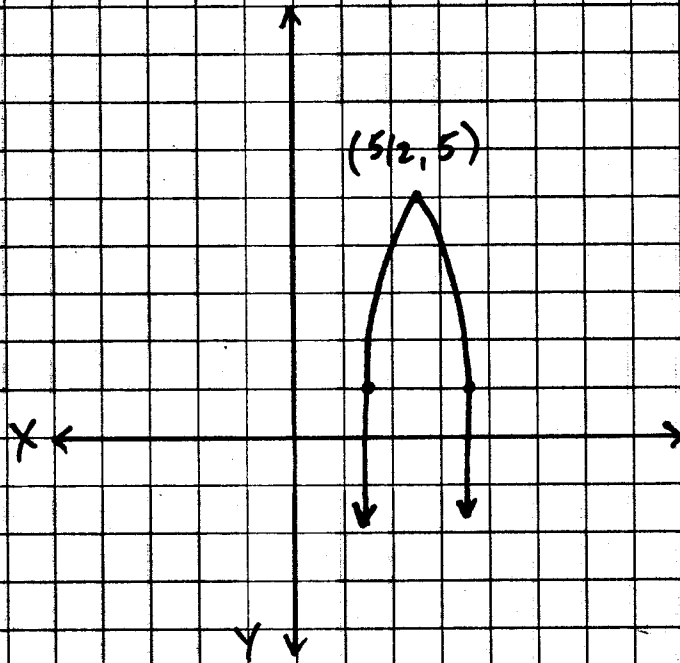
4. $X = \frac{1}{4}(y-2)^2 + 3$



Focus $(4, 2)$

Directrix: $X = 2$

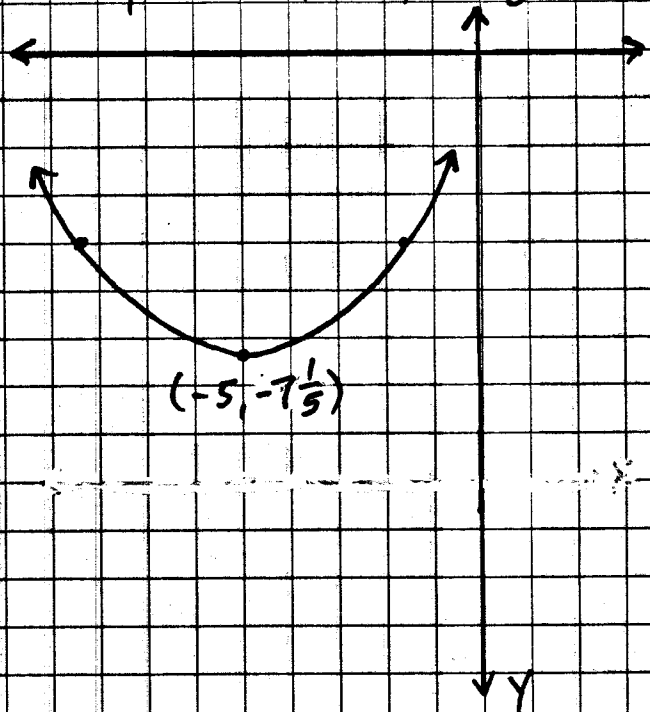
5. $y = -4(x - 5/2)^2 + 5$



Focus $(5/2, 4^{15}/16)$

Directrix: $y = 5^{11}/16$

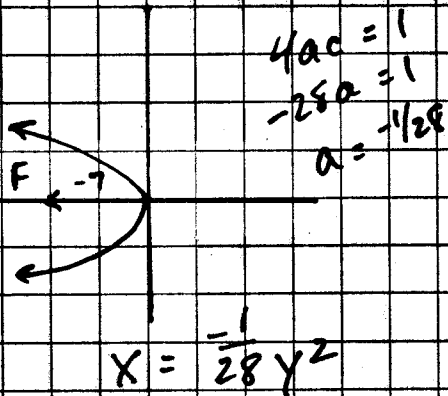
6. $y = \frac{1}{5}(x + 5)^2 - \frac{36}{5}$



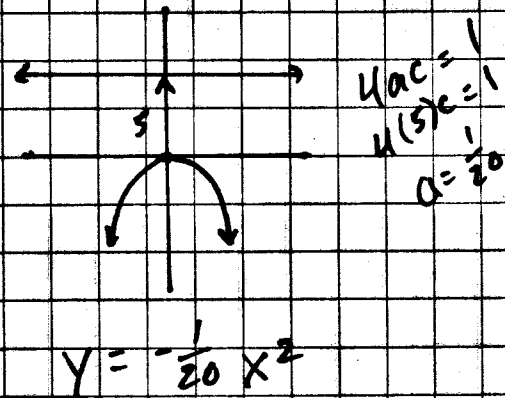
Focus $(-5, -5 \frac{19}{20})$

Directrix: $y = -8 \frac{9}{20}$

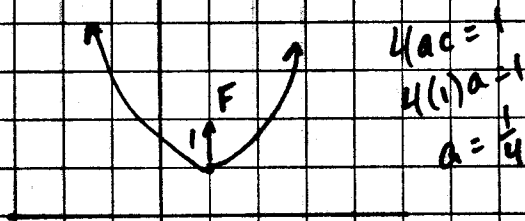
7.



8.



9.



either $\begin{cases} y = \frac{1}{4}(x-1)^2 + 1 \\ y = \frac{1}{4}x^2 - \frac{1}{2}x + \frac{5}{4} \end{cases}$

$4ac = 1$
 $4a(1/2) = 1$
 $2a = 1$
 $a = 1/2$

either $\begin{cases} x = -1/2(y-1)^2 + 1 \\ x = -1/2y^2 + y + 1/2 \end{cases}$