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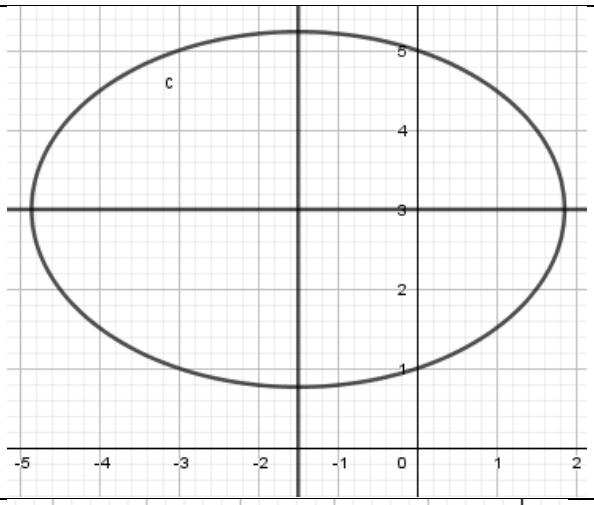
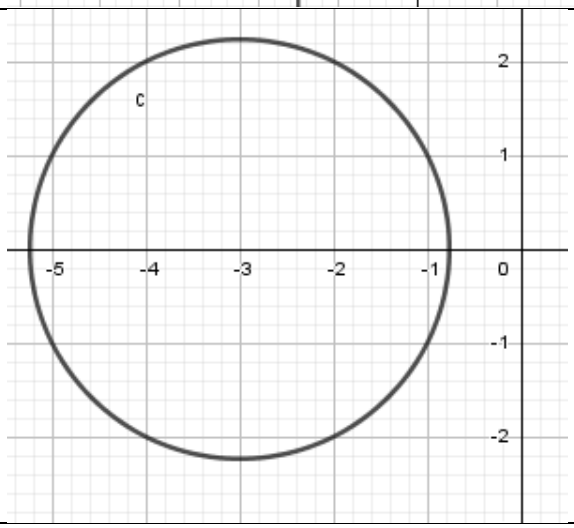
For the practice in this unit, pick 4 from each practice

Practice 1

Classify and graph each conics below, also find their characteristic properties.

1. $8x^2+18y^2+24x-108y+90=0$	
2. $x^2+y^2+6x+4=0$	

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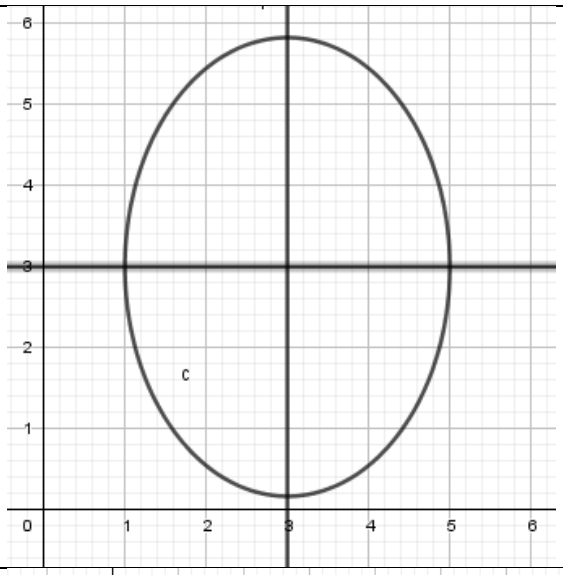
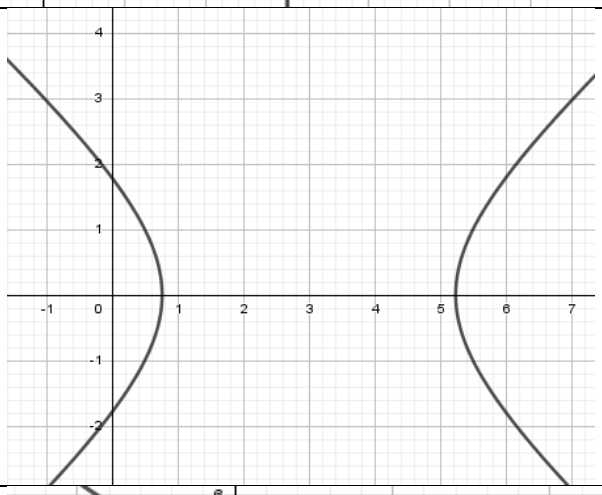
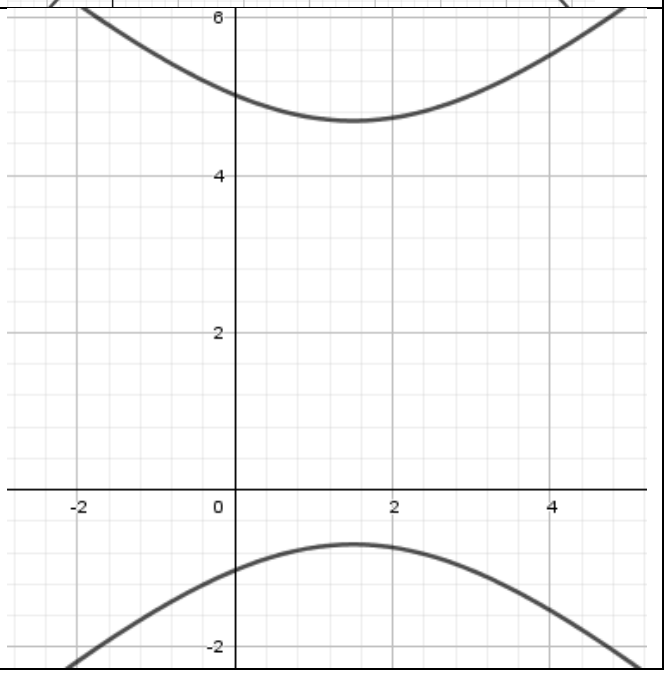
3. $2x^2 + y^2 - 12x - 6y + 19 = 0$	
4. $-4x^2 + 5y^2 + 24x - 16 = 0$	
5. $-20x^2 + 24y^2 + 60x - 96y - 123 = 0$	

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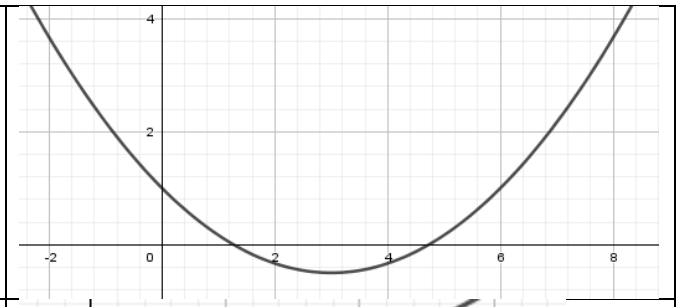
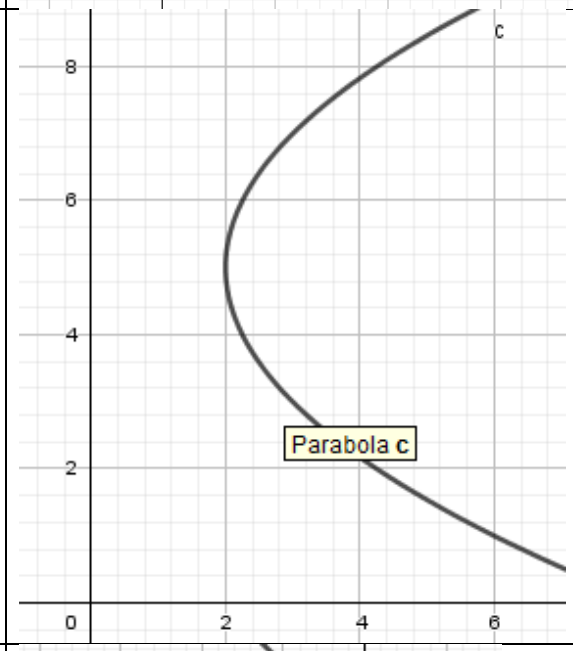
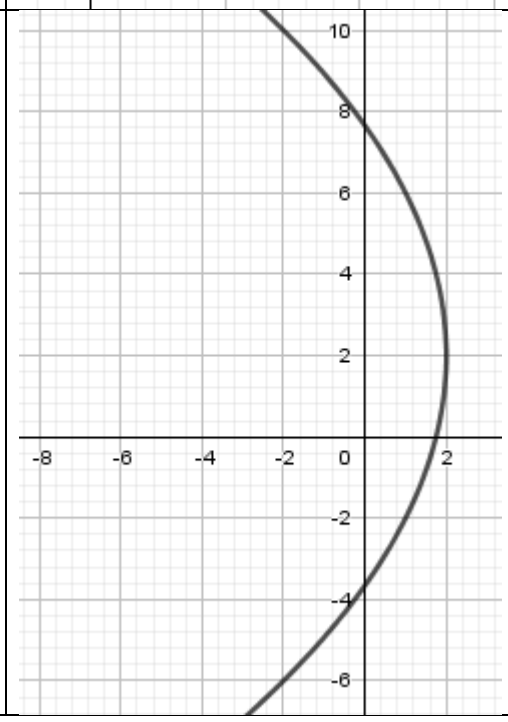
6. $x^2-6x-6y+6=0$	
7. $y^2-4x-10y+33=0$	
8. $y^2+16x-4y=28$	

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Practice 2

Find the hyperbola based on the given characteristics

1. Vertices: $(5,-2),(1,-2)$, passes through $(0,-2+\sqrt{5})$	$\frac{(x-3)^2}{4}-\frac{(y+2)^2}{4}=1$
2. Vertices: $(2,3),(2,-3)$ passes through $(0,5)$	$\frac{y^2}{9}-\frac{(x-2)^2}{\frac{9}{4}}=1$
3. vertices: $(4,1),(4,9)$ foci: $(4,0),(4,10)$	$\frac{(y-5)^2}{16}-\frac{(x-4)^2}{9}=1$
4. vertex: $(3,-6)$ asymptotes: $y=x-6, y=-x$	$(y+3)^2-(x-3)^2=1$
5 vertex: $(4,\frac{3}{2})$ asymptotes: $y=\frac{5}{3}x-\frac{8}{3}$, $y=-\frac{5}{3}x+\frac{32}{3}$	$\frac{(y-4)^2}{\frac{25}{4}}-\frac{(x-4)^2}{\frac{9}{4}}=1$
6. vertex: $(2,-5)$ asymptotes: $y=\frac{1}{2}x-4, y=-\frac{1}{2}x-6$	$\frac{(x+2)^2}{16}-\frac{(y+5)^2}{4}=1$
7.focus: $(1+\sqrt{10},2)$ asymptotes: $y=\frac{1}{2}x+\frac{3}{2}, y=-\frac{1}{2}x+\frac{5}{2}$	$\frac{(x-1)^2}{8}-\frac{(y-2)^2}{2}=1$
8. focus: $\left(-2,-5-\sqrt{26}\right)$ asymptotes: $y=1.5x-2, y=-1.5x-8$	$\frac{(y+5)^2}{18}-\frac{(x+2)^2}{16}=1$