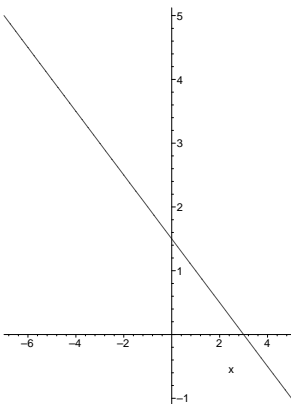
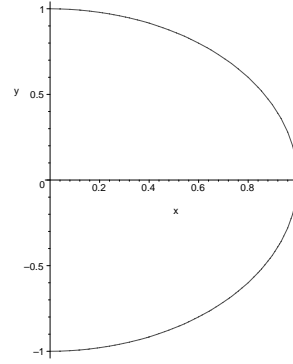


## Answers to WIR 1 Review Problems

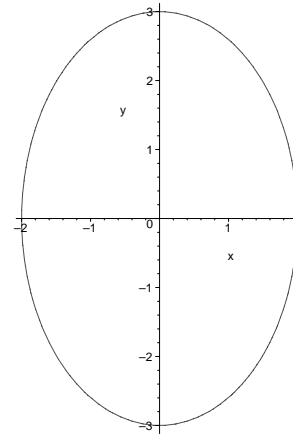
1.  $\langle 4, -9 \rangle$
2. a.)  $\langle 3, 5 \rangle$   
b.)  $\langle -2, -1.5 \rangle$   
c.)  $\langle -5, -1 \rangle$   
d.)  $\langle -4, 2.5 \rangle$   
e.)  $\sqrt{5}$
3.  $s = \frac{-9}{7}, t = \frac{13}{7}$
4.  $\langle 3/\sqrt{13}, -2/\sqrt{13} \rangle$
5. Speed: approximately 23.55 mph, Direction: approximately  $N65^\circ E$
6.  $F = \langle 4, 2\sqrt{3} \rangle, |F| \approx 5.2915 \text{ lbs}, \theta \approx 41^\circ$
7. Right wire approx 71.73 lbs;  
Left wire approx 58.56 lbs;
8. a.)  $-1$   
b.)  $6\sqrt{3}$
9.  $\theta \approx 108^\circ$
10.  $x = 0$  and  $x = 4$
11.  $\langle -1/\sqrt{5}, -2/\sqrt{5} \rangle$
12. vector projection:  $\langle 77/37, 55/37 \rangle$ ; scalar projection:  $22/\sqrt{74}$
13. vector projection:  $\langle -66/37, -11/37 \rangle$ ; scalar projection:  $-11/\sqrt{37}$
14.  $8/\sqrt{5}$
15.  $2500\sqrt{3}$  Joules
16.  $\angle A \approx 68^\circ$
17. a.)



b.)



c.)



d.)

