4.3 Determinants

**Solve for x.**

1.) det $\left[\begin{matrix}x&5\\-3&9\end{matrix}\right]$ = -39

2.) $\left|\begin{matrix}2&x\\5&x+1\end{matrix}\right|$ = -22

3.) det $\left[\begin{matrix}1&16&-2\\20&4&x\\7&1&-4\end{matrix}\right]$ = 1502

4.) $\left|\begin{matrix}8&x&9\\12&3&9\\3&x+11&4\end{matrix}\right|$ = 441