Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour 1. 2. 3. 4. 5

**Determinants**

Find the value of each determinant.

1. $\left|\begin{matrix}10&6\\5&5\end{matrix}\right|$ 2. $\left|\begin{matrix}8&5\\6&1\end{matrix}\right|$ 3. $\left|\begin{matrix}-7&3\\-9&7\end{matrix}\right|$

4. $\left|\begin{matrix}-2&4\\3&-6\end{matrix}\right|$ 5. $\left|\begin{matrix}2&-7\\-5&3\end{matrix}\right|$ 6. $\left|\begin{matrix}-6&-2\\8&5\end{matrix}\right|$

7. $\left|\begin{matrix}-9&0\\-12&-7\end{matrix}\right|$ 8. $\left|\begin{matrix}6&14\\-3&-8\end{matrix}\right|$ 9. $\left|\begin{matrix}15&11\\23&19\end{matrix}\right|$

10. $\left|\begin{matrix}21&43\\16&31\end{matrix}\right|$

Evaluate each determinant using expansion by minors.

11. $\left|\begin{matrix}3&1&2\\0&6&4\\2&5&1\end{matrix}\right|$ 12. $\left|\begin{matrix}7&3&-4\\-2&9&6\\0&0&0\end{matrix}\right|$ 13. $\left|\begin{matrix}-2&7&-2\\4&5&2\\1&0&-1\end{matrix}\right|$

Evaluate each determinant using diagonals.

14. $\left|\begin{matrix}1&1&1\\3&9&5\\8&7&4\end{matrix}\right|$ 15. $\left|\begin{matrix}1&5&2\\-6&-7&8\\5&9&-3\end{matrix}\right|$ 16. $\left|\begin{matrix}8&-9&0\\1&5&4\\6&-2&3\end{matrix}\right|$

17. Solve for x if det$\left[\begin{matrix}2&x\\5&-3\end{matrix}\right]$ = 24