TEXTBOOK: Linear Algebra
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READ: Sections 4.2 4.3.

PROBLEMS:

1. Section 4.2: # 26, 30, 32, 35.
2. Section 4.3: # 6, 16, 20, 22, 26, 28, 35, 36, 37, 38, 39.
3. Show that if A is an $n \times n$ matrix, then $det(rA) = r^n det(A)$.
4. If A and B are 4×4 matrices and $det(A) = 3$ and $det(B) = 5$, what is the determinant of

$$(3A)^{-1} \qquad 3(B^{-1}), \qquad (2A)B^{-1}, \qquad (\frac{1}{5}B)A, \qquad (3A^{-1})$$

5. Let

$$A = \begin{bmatrix} a_1 & a_2 & a_3 & a_4 \\ b_1 & b_2 & b_3 & b_4 \\ c_1 & c_2 & c_3 & c_4 \\ d_1 & d_2 & d_3 & d_4 \end{bmatrix}.$$

If the determinant of A is 5, find the determinant of