

MapleT.A. 2010 Matematik 2A hold 4 : Lay3supplTF



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2010 Matematik 2A hold 4, Lay3supplTF Rasmus Veiergang Prentow, 5/31/10 at 12:46 PM

Question 1: Score 0/1

If A is a 2×2 matrix with zero determinant, then one column of A is a multiple of the other.



Your Answer:

Correct Answer: True

Question 2: Score 0/1

If two rows of a 3×3 matrix are the same, then $\det A = 0$.



Your Answer:

Correct Answer: True

Question 3: Score 0/1

If A is a 3×3 matrix, then $\det 5A = 5 \det A$.



Your Answer:

Correct Answer: False

Question 4: Score 0/1

If A and B are $n \times n$ matrices with $\det A = 2$ and $\det B = 3$, then $\det(A + B) = 5$



Your Answer:

Correct Answer: False

Question 5: Score 0/1

If A is $n \times n$ and $\det A = 2$, then $\det A^3 = 6$.



Your Answer:

Correct Answer: False

Question 6: Score 0/1

If B is produced by interchanging two rows in A, then $\det A = \det B$.



Your Answer:

Correct Answer: False

Question 7: Score 0/1





Your Answer: Correct Answer: True

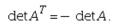
Question 8: Score 0/1

If B is formed by adding to one row in A a linear combination of the other rows in A, then $\det B = \det A$.



Your Answer: Correct Answer: True

Question 9: Score 0/1





Your Answer:

Correct Answer: False

Question 10: Score 0/1

$$det(-A) = - det A$$



Your Answer:

Correct Answer: False

Comment:

The general result is that for A an $n \times n$ matrix we have $\det(-A) = (-1)^n \det A$.

Question 11: Score 0/1

If
$$A^3 = 0$$
, then $\det A = 0$.



Your Answer:

Correct Answer: True

Comment:

We have $\det(A^3) = (\det A)^3$, and $(\det A)^3 = 0$ implies $\det A = 0$.

Question 12: Score 0/1

If
$$A$$
 is invertible, then $\det A^{-1} = \det A$.



Your Answer:

Correct Answer: False

Question 13: Score 0/1

If
$$A$$
 is invertible, then $(\det A)(\det A^{-1}) = 1$.



Your Answer:

Correct Answer: True