Assignment 12

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1) The transformation

\[ Q = p + iq \quad P = \alpha(p - iq) \]

Options: \( \alpha = \ldots \)
- i
- -1
- -1/2
- i
- 2i

No, the answer is incorrect
Score: 0
Accepted Answers:
- -1/2

2) The transformation

\[ Q = p/q \quad P = aq^2 \]

is canonical if \( a = \ldots \)
- -1
- -1/2
- 1
- 2

No, the answer is incorrect
Score: 0
Accepted Answers:
- 1/2

3) Suppose \( A \) and \( B \) are vectors and \( M \) is a second rank tensor, then, which of the following are incorrect equations. (In all the equations below summation over repeated indices is implied.)

- \( A_i - M_{ij}B_j \)
- \( A_i - M_{ij}B_j \)
- \( A_i = M_{ij}B_j \)
- \( A_i = \varepsilon_{ijk}B_k \)

No, the answer is incorrect
Score: 0
Accepted Answers:
- \( \varepsilon_{ijk}B_k \)

4) Two tensors \( \Gamma_{ij} \) and \( \Omega_{kl} \) are combined in the following manner to form a new tensor:

\[ \Gamma_{ij} \Omega_{kl} \]

The rank of the above tensor is
- 10
- 0
- 7
- 6

No, the answer is incorrect
Score: 0
Accepted Answer:
- 6