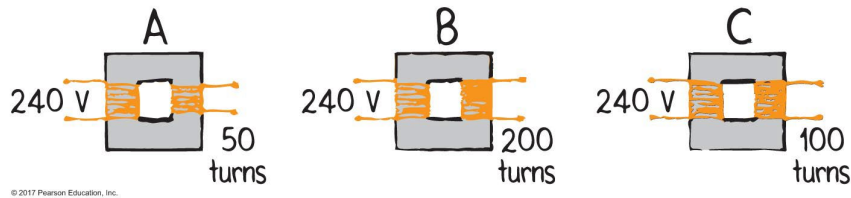


Astronomy Ranking Task: Electricity & Magnetism

Exercise #2

Description: Each of the transformers shown below, labeled A – C, is powered with 100 W and all have 100 turns on the primary coil. The number of turns on each secondary coil is indicated. Neglect any slight power losses due to core heating.



A. Ranking instructions: Rank the voltage inputs on the primary coils.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each primary coil has the same input voltage. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the voltage outputs of the secondary coils.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each secondary coil has the same output voltage. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

C. Ranking instructions: Rank the currents through the secondary coils.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each secondary coil carries the same current. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

D. Ranking instructions: Rank the power outputs in the secondary coils.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ Least

Or, each secondary coil outputs the same amount of power. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
