

- 34 A student constructs a transformer that has 10 turns on the primary coil. He then constructs a second transformer, identical except that it has an extra 20 turns on the primary coil.

The transformers may be considered to be ideal and are used under identical conditions with the same input voltage.

How do the output voltage and current of the second transformer compare to that of the first transformer?

| | output voltage | output current |
|---|----------------|----------------|
| A | $\frac{1}{3}$ | $\frac{1}{3}$ |
| B | $\frac{1}{3}$ | 3 |
| C | $\frac{1}{2}$ | $\frac{1}{2}$ |
| D | $\frac{1}{2}$ | 2 |