

PREP 4 • LESSONS 7–8

Combining resistors and I–V graphs

Resistors in series and parallel (required practical) • I–V characteristics

 SCORE
/10

Name _____ Class _____ Due _____

Do Now REMEMBER

From earlier lessons • 1 mark each

1 Describe how to calculate the total resistance of two resistors in series. [1]

2 Describe the potential difference across components in parallel. [1]

3 Describe how the length of a wire affects its resistance. [1]

Key ideas LESSONS 7–8

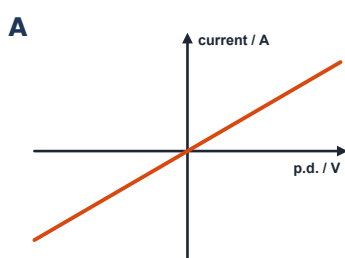
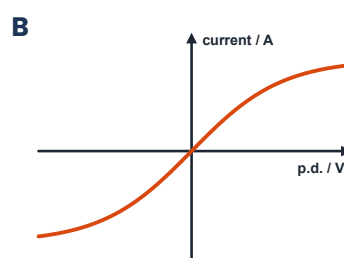
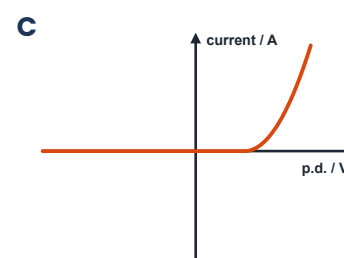
Show your working

 4 Two $10\ \Omega$ resistors are connected in parallel.

 a Their total resistance is [1]

b Explain why adding a resistor in parallel decreases the total resistance. [2]

5 These are the I–V characteristics of three components.


 a Which graph shows a filament lamp? [1]

 b Which component lets current flow in one direction only? [1]

c Explain why the resistance of a filament lamp increases as the current increases. [2]