

Question Number	Answer	Mark																				
13a	<p>Z has greater (cross sectional) area than W (1)</p> <p>So Z has smaller resistance than W (1)</p> <p>Z has greater current than W (1)</p> <p>Since $I = nAve$, with both A and I $4 \times$ greater in Z, (drift velocity is the same) (1)</p>	4																				
13b	<table><tr><th>Quantity</th><th>Same value for W and Z</th><th>Larger value in W</th><th>Larger value in Z</th></tr><tr><td>Current in the wires</td><td>×</td><td></td><td></td></tr><tr><td>Resistance of the wires</td><td></td><td>×</td><td></td></tr><tr><td>Potential difference across the wires</td><td></td><td>×</td><td></td></tr><tr><td>Drift velocity of the charge carriers in the wires</td><td></td><td>×</td><td></td></tr></table>	Quantity	Same value for W and Z	Larger value in W	Larger value in Z	Current in the wires	×			Resistance of the wires		×		Potential difference across the wires		×		Drift velocity of the charge carriers in the wires		×		4
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Total for question 13		8																				