Examiner's Use

1 A digital voltmeter with a three-digit display is used to measure the potential difference across a resistor. The manufacturers of the meter state that its accuracy is ±1% and ±1 digit. The reading on the voltmeter is 2.05 V.

(a) For this reading, calculate, to the nearest digit,

(i) a change of 1% in the voltmeter reading,

change = ...V [1]

(ii) the maximum possible value of the potential difference across the resistor.

maximum value = ...V [1]

(b) The reading on the voltmeter has high precision. State and explain why the reading may not be accurate.

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