

SMART EXAM RESOURCES
9702 PHYSICS TOPIC QUESTIONS
TOPIC: PHYSICAL QUANTITIES AND UNITS
SUB-TOPIC: ERRORS AND UNCERTAINTIES
SUB-SUB-TOPIC: EFFECTS OF ERRORS

- 1** (a) Describe the effects, one in each case, of systematic errors and random errors when using a micrometer screw gauge to take readings for the diameter of a wire.

systematic errors:

.....

random errors:

.....

[2]

MARKING SCHEME:

systematic: the reading is larger or smaller than (or varying from) the true reading by a constant amount

B1

random: scatter in readings about the true reading

B1 [2]

- 2 (a) Describe the effects, one in each case, of systematic errors and random errors when using a micrometer screw gauge to take readings for the diameter of a wire.

systematic errors:

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random errors:

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[2]

Mark Scheme:

(a) systematic: the reading is larger or smaller than (or varying from) the true reading by a constant amount

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random: scatter in readings about the true reading

B1 [2]