

5 Four possible sources of error in a series of measurements are listed.

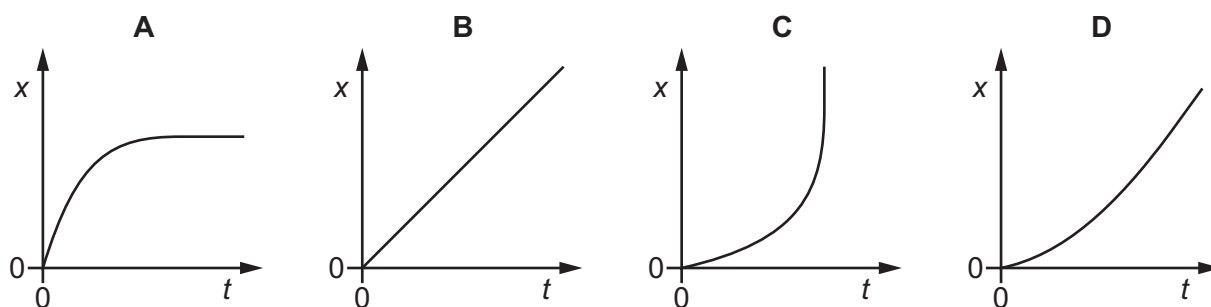
- 1 an analogue meter whose scale is read from different angles
- 2 a meter which always measures 5% too high
- 3 a meter with a needle that is not frictionless, so the needle sometimes sticks slightly
- 4 a meter with a zero error

Which errors are random and which are systematic?

| | random error | systematic error |
|----------|--------------|------------------|
| A | 1 and 2 | 3 and 4 |
| B | 1 and 3 | 2 and 4 |
| C | 2 and 4 | 1 and 3 |
| D | 3 and 4 | 1 and 2 |

6 A football falls from the top of a tall building.

Which graph best represents the way in which the distance x fallen varies with time t ?



7 Two identical cars P and Q are travelling along a straight road. Car Q is travelling at twice the speed of car P. The brakes are applied to both cars, producing the same constant deceleration.

Which graph shows how the velocity v of each car varies with time t ?

