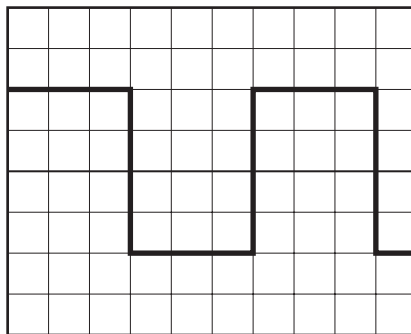


- 4 A cathode-ray oscilloscope displays a square wave, as shown.



The time-base setting is 0.20 ms per division.

What is the frequency of the square wave?

- A** 0.83 Hz      **B** 830 Hz      **C** 1300 Hz      **D** 1700 Hz
- 5 A measurement is taken correctly but with a ruler at a significantly higher temperature than that at which the ruler was calibrated. The higher temperature causes the ruler to expand.
- What describes the effect on the measurement caused by the higher temperature and how the measurement may be improved?
- A** The measurement will be subject to a random error. The measurement can be made more accurate by taking the average of several repeated measurements.
- B** The measurement will be subject to a random error. The measurement can be made more precise by taking the average of several repeated measurements.
- C** The measurement will be subject to a systematic error. The measurement can be made more accurate by taking the average of several repeated measurements.
- D** The measurement will be subject to a systematic error. The measurement can be made more precise by taking the average of several repeated measurements.