

10 A detector is placed 30 cm from a gamma source, the count rate is 64 counts per minute.

The detector is then placed 60 cm from the source. The background rate is presumed to be a constant 24 counts per minute.

Which of the following gives the expected counts per minute?

☐ **A** 16

☐ **B** 32

☐ **C** 34

☐ **D** 44

(Total for Question 10 = 1 mark)