

- 16** A point source emits energy in the form of waves such that a detector of cross-sectional area  $A$  at a distance of  $x$  from the point source receives power  $P$ . A second detector of cross-sectional area  $2A$ , is placed at another position such that its distance is  $0.5x$  from the same point source.

What is the power received by the second detector?

**A**  $P$

**B**  $2P$

**C**  $4P$

**D**  $8P$