17 A transmitting aerial emits vertically polarised radio waves. A receiving aerial is positioned at an angle θ from the horizontal and is in the plane perpendicular to the direction of plane-polarised waves. The amplitude of the wave received is A.

Which of the following is the total power of the transmitting aerial directly proportional to?

A $A^2 \cos^2 \theta$ **B** $\dfrac{A^2}{\cos^2 \theta}$ **C** $A^2 \sin^2 \theta$ **D** $\dfrac{A^2}{\sin^2 \theta}$