18 A double star is at a distance of 20 light years from the Earth. A telescope with a diameter of 3.0 m is used to view the star.

(A light year is the distance light travels in a vacuum in one year. This is 9.5×10^{15} m.)

What is the approximate minimum separation between the two stars of the double star that can be detected by the telescope?

A 5.0×10^{8} m

B 1.0×10^{9} m

C 3.0×10^{10} m

D 3.0×10^{11} m