Prelab:
Exploring the earth’s interior

*Please show all work!*

Name: _____________________________________________

1. What is the diameter of the Earth in kilometers?

2. If a seismic wave travels 11 km/sec through the entire Earth, how long will it take to get to the other side?

3. What is the angle of \(a\)?

4. What is the \(\sin(a)\)?

5. If the circle represents the earth, what is the value of \(B\) in kilometers?

6. The sine of an angle is equal to the opposite divided by the adjacent sides of a right triangle. As a result, \(\sin(a) = \frac{C}{B}\). Solve for \(C\).

7. What is the straight line distance from \(b\) to \(c\)? (Note the answer is not the same as the question above.)

![Diagram](image-url)