Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block \_\_\_\_ Binder Page # \_\_\_\_

***\_\_\_\_\_ / \_10\_ pts***

***P-Wave and S-Wave Travel Time Practice QUIZ***

**Travel Time** of a P-wave or S-wave, given the distance.

(a) Find distance on X-axis, go up to the correct curve

(b) Go over to the Y-axis and find **travel time**

1. How long does it take an S-wave to travel 5,000 km? \_\_\_\_\_\_\_\_ Minutes \_\_\_\_\_\_\_\_ seconds

**Epicenter Distance** a P-wave or S-wave traveled, given travel time

(a) Go to travel time on Y-axis and go over to correct curve

(b) Go down to X-axis to determine distance

2. How far can a P-wave travel in 5 minutes 40 seconds? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ km

**Origin Time** (the time the earthquake occurred)….

1. Determine **travel time** of the given wave (see #1-4)
2. ***Subtract* arrival time given** minus **travel time**

3. If an S-wave arrives at a station 3,000 km away at 07:45:00, what time did the earthquake originate?

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**Difference in Arrival Time** between P-waves and S-waves, given the epicenter **distance**

1. Line up paper vertically on the distance given
2. Mark paper where S and P waves intersect

(c) Line up paper on Y-axis, P wave on 0 minute mark

(d) S-wave mark indicates the difference in arrival time

4. An epicenter station is 9,000 km away. How long after the first P-wave did the first S-wave occur?

\_\_\_\_\_\_\_\_ Minutes \_\_\_\_\_\_\_\_ seconds

**Epicenter Distance using the difference in arrival time of P-wave and S-wave**

(a) Find difference in clock time between P-wave and S-wave by subtracting the given times

(b) Use Y-axis (time travel) and scrap paper to mark the time difference

(c) Slide scrap paper along graph to find location where the interval is touching both the P and S wave line

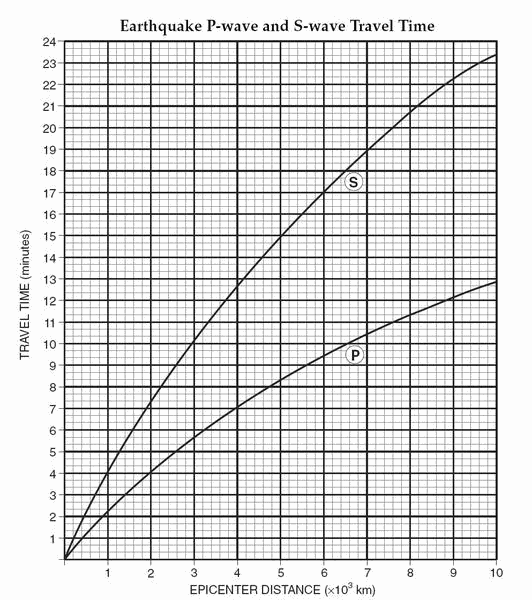
(d) Find epicenter distance by going down to the X-axis

5. The first P-wave arrived at a seismic station at 10:00:00. The first S-wave arrived at the same seismic station at 10:07:40. How far is this seismic station from the epicenter?

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