STORY PROBLEM CARDS

Soda Story

A restaurant currently sells medium drinks and small drinks. The small drink contains 16 ounces and costs $0.97. The medium drink contains 22 ounces and costs $1.29. The owners of the restaurant want to introduce a large-sized drink. How many ounces should the large drink contain, and what should the price be for the relationship to be linear?

City Planning

On a map, the fire station is located at $(-2, 6)$ and the church is at $(6, -6)$.

What are the coordinates of the post office if it is located exactly **one quarter** of the way from the fire station to the church?

Battleship

Two ships started at the same point and steamed in opposite directions at the same speed. After one hour, the USS Zumwalt was at the point $(17, 33)$ and the USS Newport News was at $(-19, -35)$. At what point did they start?

Coordinate Conundrum

Point B has the coordinates $(-5, 6)$ and point C has the coordinates $(2, -1)$. B is the midpoint of $\overline{AC}$, C is the midpoint of $\overline{AE}$, and D is the midpoint of $\overline{BE}$. Find the coordinates of points A, D, and E.

Town Travels

Bryan lives 1 mile east and 2 miles north of his town's center. Eastside High is located 5 miles east and 3 miles south of the town's center. Westside High is located 2 miles west and 5.75 miles north of the town's center. Bryan says he should go to Eastside High school, since he lives on the east side of town. Does this make mathematical sense? Explain.
Hint: Let the town center be at the origin.

Real Estate Rules

In a certain town, a 4-bedroom, 2-bathroom house that is 1,640 square feet costs $330,490.

In the same town, a 4-bedroom, 2-bathroom house that is 1730 square feet costs $393,840.

How much would you estimate an 1820 square foot, 4-bedroom, 2-bathroom house costs in that town?