

Welcome Back MYP Math 9

	Assignment Effort Grade (Circle One)	Comments (What was interesting or challenging?)
Monday Date: 10/16 Topic: Quiz 2.1	0 1 2	
Tuesday Date: 10/17 Topic: Midpoint	0 1 2	Finding the midpoint was really fun!
Wednesday Date: _____ Topic: _____	0 1 2	
Thursday Date: _____ Topic: _____	0 1 2	
Friday Date: _____ Topic: _____	0 1 2	

Class Plan:

1. Warm-up

2. Meet Mr. Ehlke's friends

3. Practice a real life assessment

4. Self Assess/Consider Ideas for my own assessment

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Warm-up:

A student is walking to a friend's house.

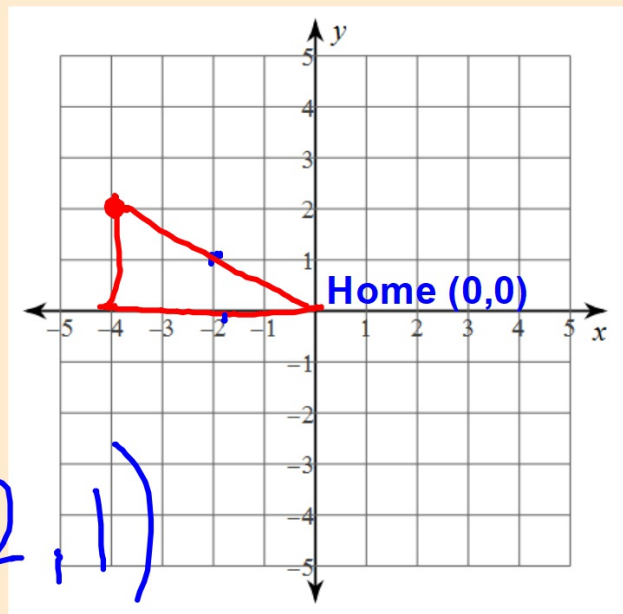
She walks 4 blocks West & 2 blocks North.

What is the midpoint?

(0,0) and (-4,2)

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

N
W ← → E
S = (-2, 1)



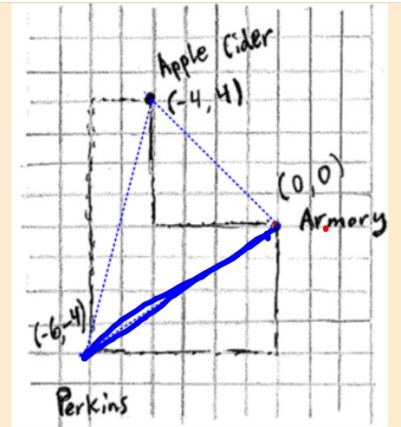
Duluth Drive

Meet Mr. Ehlke's friends!



Duluth Drive

- Mr. Ehlke and his friends Yarrow and Zara start their day from the *Historic Duluth Armory*. They drive **4 miles South** and **6 miles West** to have breakfast at *Perkins*.



- After a breakfast of pancakes, they leave *Perkins* and drive **8 miles North** and **2 miles East** to arrive at the *Apple Cider Festival*.



- At the end of the day, with stomachs full of apples, they drive **4 miles South** and **4 miles East** to get back to the *Historic Duluth Armory*.

Duluth Drive

1. Duluth Drive Task

2. Answer Questions in
Notebook/Lined Paper

Done? Compare your work to Mr. Ehlke's. What more could he have done?

Duluth Drive

Questions involving Mr. Ehlke's Duluth Trip:

a) How many miles were driven in total?

b) Imagine there were roads directly connecting the three stops. How long would these roads be?

- Armory to Perkins:
- Perkins to Cider:
- Cider to Armory:

c) How much shorter would their drive have been if they drove on these imaginary roads?

d) Defend why we are allowed to use Pythagorean Theorem here.

e) There is a solar power plant that lies directly between the Perkins and Historic Duluth Armory. Where is the power plant? What are the coordinates?

f) If the power plant can power both Perkins and the Armory, how far from the plant does the power reach? (*Distance from plant to Perkins or Armory*)

Duluth Drive

Questions involving Mr. Ehlke's Duluth Trip:

a) How many miles were driven in total?

a) 28 miles

Duluth Drive

b) Imagine there were roads directly connecting the three stops. How long would these roads be?

- Armory to Perkins:
- Perkins to Cider:
- Cider to Armory:

$$\begin{aligned} \text{Armory to Perkins: } & \sqrt{4^2 + 6^2} = \sqrt{16 + 36} = \sqrt{52} \approx 7.21 \text{ miles} \\ \text{Perkins to Cider: } & \sqrt{8^2 + 2^2} = \sqrt{64 + 4} = \sqrt{68} \approx 8.25 \text{ miles} \\ \text{Cider to Armory: } & \sqrt{4^2 + 4^2} = \sqrt{16 + 16} = \sqrt{32} \approx 5.66 \text{ miles} \end{aligned}$$

Duluth Drive

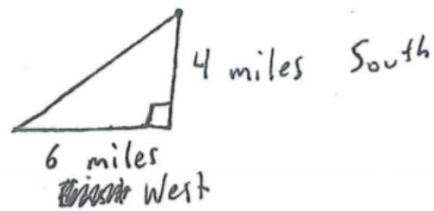
c) How much shorter would their drive have been if they drove on these imaginary roads?

$$c) 28 - (7.21 + 8.25 + 5.66) = 28 - 21.12 = \underline{6.88 \text{ miles shorter}}$$

Duluth Drive

d) Defend why we are allowed to use Pythagorean Theorem here.

d) Because North, South, East, and West are set at right angles to each other, the triangles formed are right. For example: 4 miles south and 6 miles West:



Duluth Drive

e) There is a solar power plant that lies directly between the Perkins and Historic Duluth Armory. Where is the power plant? What are the coordinates?

$$e) (-3, -2) = \left(\frac{0 + -6}{2}, \frac{0 + -4}{2} \right)$$

Duluth Drive

f) If the power plant can power both Perkins and the Armory, how far from the plant does the power reach? (Distance from plant to Perkins or Armory)

$$f) \quad d = \sqrt{(-3-0)^2 + (-2-0)^2} = \sqrt{(-3)^2 + (-2)^2} = \sqrt{9 + 4} = \sqrt{13} \text{ miles} \\ \approx 3.61 \text{ miles}$$

Exercises tonight:

1. Check your work against Mr. Ehlke's key.
2. Consider what score out of 8 you would give yourself. How could you defend this score if you were to grade yourself?
3. Grab a piece of graph paper and start writing a scenario that includes the concepts we've been learning.