11

Student A

Math 7

Jenna is training for the women's four miler race in Charlottesville. She runs on a trail located in her neighborhood. According to her map, the trail is 11 inches long. The key shows that for every 1.25 inches of trail on the map, she will run ¼ of a mile. The beginning and end of the trail do not connect. A lap will require Jenna to run to the end of the trail, turnaround, and run back to the beginning.

1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

$\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}+\frac{1}{4}$

$1+1+1+1$

4 miles

1.25
× 16
20 inches

Student B

Math 7

Jenna is training for the women's four miler race in Charlottesville. She runs on a trail located in her neighborhood. According to her map, the trail is 11 inches long. The key shows that for every 1.25 inches of trail on the map, she will run ¼ of a mile. The beginning and end of the trail do not connect. A lap will require Jenna to run to the end of the trail, turnaround, and run back to the beginning.

Ratio .25:1.25

If she wants to run exactly 4 miles, how many laps will she need to complete? If it is more than a lap, explain exactly how much more it is. If it is less than a lap, explain exactly what part of a lap it is. Carefully explain your reasoning and show all your work.

$\frac{.25}{1.25} = \frac{x}{1}$

$\frac{1.25x}{1.25} \quad \frac{1}{1.25}$

$x = .8$

$\frac{.25}{1.25} = \frac{x}{11}$

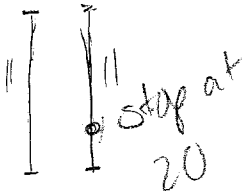
$\frac{1.25x}{1.25} \quad \frac{2.75}{1.25}$

$x = 2.2$

$1.25 \times 4 = 5$

$\frac{1\text{mi}}{5\text{in}} = \frac{4}{x}$ (×4, ×4)

$x = 20\text{in.}$



She would need to run about $\frac{4}{5}$ of the trail, I think. I used ratio to try and proportion it out, but I'm not sure I got it right. Because 2.2th = 2.2 miles So 5 inches on the map = 1 mile. She would run a little less than 1 lap. because ~~I know~~ she'd only need to run 20 inches. which is 4 miles. To be exact, $\frac{10}{11}$ of a lap. (Sorry about this paragraph, I wrote down all my thoughts even though they don't make sense.).

$\frac{1}{5\text{in}} = \frac{x\text{mi}}{20\text{in}}$ (×4, ×4)

$x = 4$

$\frac{20}{22} = \frac{10}{11}$

Student C

Math 7

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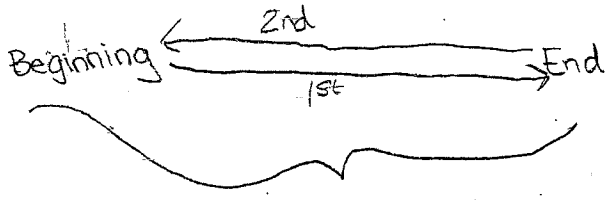
1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

1.25 in × 4 miles = 5.00 inches



11 inches long

1.25 inches × 11 inches
125
+1250
13.75 inches

.25
4 | 1.00
-100
0

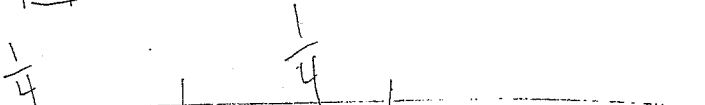
1.25 × .25
625
+2500
31.25

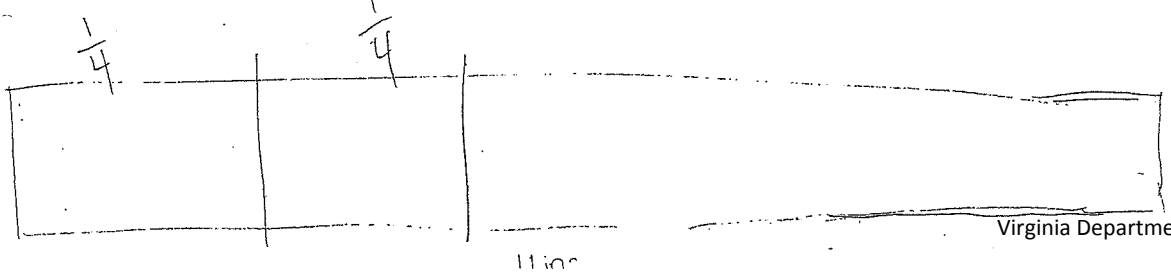
.25 × 11
25
+250
2.75 mile

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$ mi

.25 + .25 + .25 + .25 = 1 mi

.25 × 4 = 1.00





Student D

Math 7

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1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

5.00 in = 1 mile

1.25 × 11 =

2.25 5.25 21.125

1 lap

Student E

Math 7

Jenna is training for the women's four miler race in Charlottesville. She runs on a trail located in her neighborhood. According to her map, the trail is 11 inches long. The key shows that for every 1.25 inches of trail on the map, she will run ¼ of a mile. The beginning and end of the trail do not connect. A lap will require Jenna to run to the end of the trail, turnaround, and run back to the beginning.

1.25
x 8
10.00

1.25 2.50 3.75 5.0 6.25 7.50 8.75 10.00 11.00

0 1/4 1/2 3/4 1 1 1/4 1 1/2 1 3/4 2 2 1/8

4 1/4

1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

Student F

1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

$1.25 \times 4 = 5$

5 in = 1 mile

$\frac{5 \times 4}{1 \times 4} = \frac{\boxed{20}}{4}$ in / miles

$20 \div 11 = 1.\overline{81}$

To run 4 miles, Jenna will run the trail $1.\overline{81}$ times, or $1.\overline{81}$ laps.

$X =$ ~~[illegible]~~ % of lap Jenna ran to run 4 miles

$\frac{X}{1 \text{ lap}} = \frac{20 \text{ in}}{22 \text{ in}} = \frac{1.\overline{81}}{2 \text{ trail}}$ How much she ran / Total

1 trail = 0.5 lap

1 trail = 11 inches (map)

2 trails = 1 lap

Student G

Math 7

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¼ key

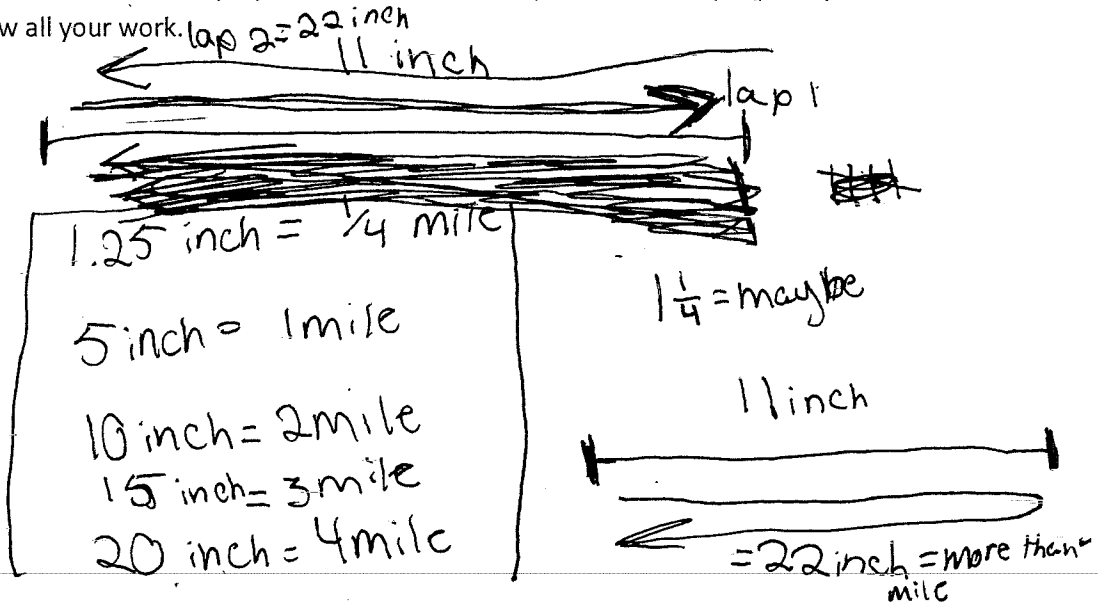
$\frac{1}{4} = 1.25$

$\frac{2}{4} = 2.5$

$\frac{3}{4} = 3.75$

$4\frac{1}{4} = 21.25$ inch

1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.



Student H

1.25 = 1/4 of a mile

Math 7

Rate

Jenna is training for the women's four miler race in Charlottesville. She runs on a trail located in her neighborhood. According to her map, the trail is 11 inches long. The key shows that for every 1.25 inches of trail on the map, she will run ¼ of a mile. The beginning and end of the trail do not connect. A lap will require Jenna to run to the end of the trail, turnaround, and run back to the beginning.

If she wants to run exactly 4 miles, how many laps will she need to complete? If it is more than a lap, explain exactly how much more it is. If it is less than a lap, explain exactly what part of a lap it is. Carefully explain your reasoning and show all your work.

Jenna will have to run 5 laps to complete a mile, then if she wants to run 4 miles, you multiply 5 by 4 and that makes 20 laps, so she will have to run 20 laps to run 4 miles.

Math 7

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1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

1.25 1/4
1.25 1/4
1.25 1/4
1.25 14

5in

5+5+1

1/2 full lap

.4 left

5+6 | 4 +5
11 | 9

1.25 inches = $\frac{1}{4}$ mile
x 4 1 mile

Student J

Jenna is training for the women's four miler race in Charlottesville. She runs on a trail located in he neighborhood. According to her map, the trail is 11 inches long. The key shows that for every 1.25 inches of trail on the map, she will run ¼ of a mile. The beginning and end of the trail do not connect. A lap will require Jenna to run to the end of the trail, turnaround, and run back to the beginning.

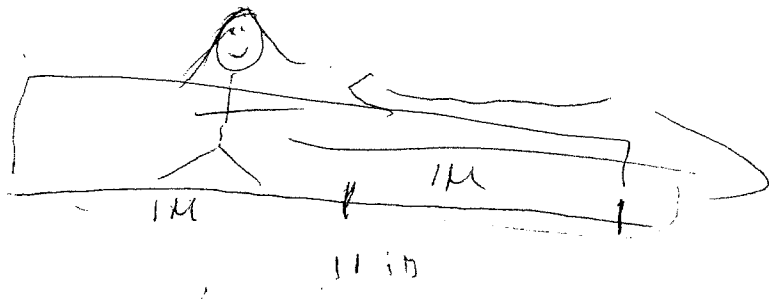
$\frac{4}{1} \times \frac{1}{4} = \frac{24}{4} = 1$

1 2
1.25
1.25
1.25
1.25
5.00
+ 1;

1. If she wants to run 4 miles, how many laps will she need to complete? Carefully explain your reasoning and show all your work.

8 laps

every two laps count as a mile and if you add 6 more laps make a mile.



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