Room for Shoes

Shoe Locker is organizing their shoe display. They would like to fit their new arrival of shoes in one row along the wall.

- Each pair of shoes takes up 0.8 meters of space.
- What is the minimum length of wall space needed to fit all 15 pairs of new shoes?

Show and justify your thinking using pictures, words, and symbols.

1	2	3	4	5	6	7	8	9	10	11	12
8	14	24	32	40	48	56	64	72	80	88	96

13	14	15
104	112	120

I counted BY 8   I used repeated addishin

120 meters

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• Shoes - 0.8 m

• 15 pairs of shoes

12 meters of total wall space.

$$15.0$$
$$\times \ 0.8$$
$$\overline{12.0}$$
$$+ \ 00.0$$
$$\overline{12.0}$$

First, we know each pair takes up 0.8 meters of space. We also know that we have 15 pairs of shoes. So we multiply 0.8 × 15 to get our product. Our product (12) is the total amount of space that will be taken up or is needed.

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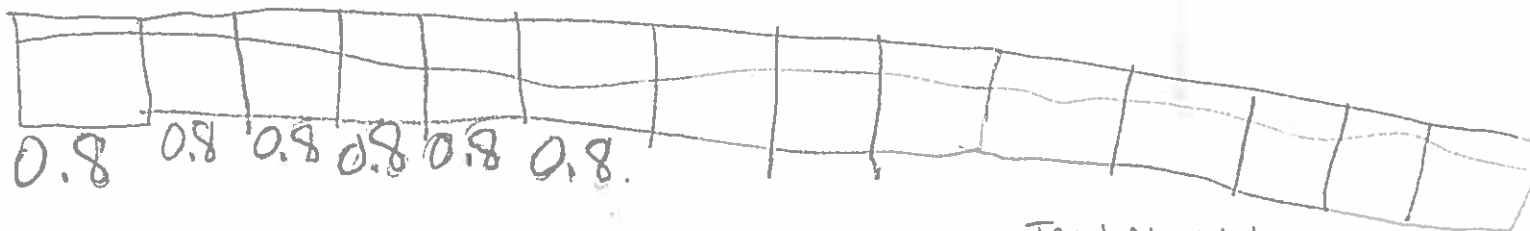
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Pair = 2

Pair = 0.8

$0.8 \times 15 = $ anser

0.8   0.8   0.8   0.8   0.8   0.8

$0.8 \times 5 = 4 \times 3 = 12$

12 meters

Teacher Note:
student stated, "I know 0.8 (5)times is 4, and I know there are 3 more 5's in 15, so $4 \times 3 = 12$."

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$$
\begin{array}{r}
\overset{4}{0}.8 \\
0.8 \\
0.8 \\
0.8 \\
+\ 0.8 \\
\hline
4.0 \\
4.0 \\
+\ 4.0 \\
\hline
12.0
\end{array}
$$

12 meters

Possible Graphic Organizers

UPSE Problem Solving Mat

UNDERSTAND (What do I know?)	PLAN (What strategy will I use?)
15 pairs is the lowest.	0.8×15 4×3

SOLVE

$$
\begin{array}{r}
4\\
\cancel{0.8}\\
0.8\\
0.8\\
0.8\\
+0.8\\
\hline
4.0\\
4.0\\
+4.0\\
\hline
12 \text{ meters}
\end{array}
$$

EXPLAIN

0.5 is how much a shoe is
15 shoes is the least.
$0.8 \times 15 = 12$

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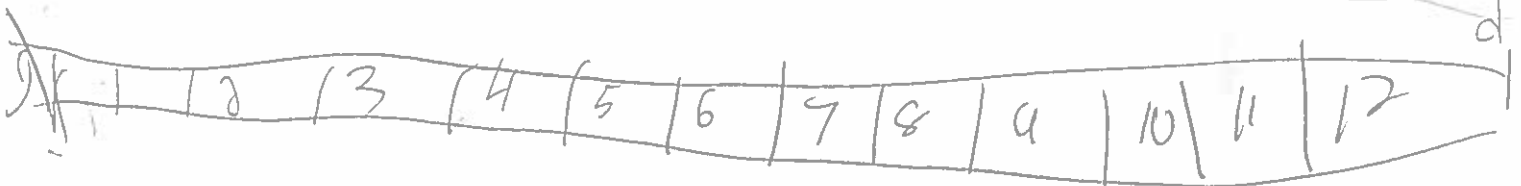
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~~Each Shoe is worth~~

the space is worth 12 length ~~so we would~~ d

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

.so
it there is 1 Row
ther the length
is 12 meters

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$\frac{8}{10} \times 15 = 12 = 0.8 \times 15 =$

12m

15

shoes

0.8

0.9   0.8   0.8

Possible Graphic Organizers

UPSE Problem Solving Mat

UNDERSTAND (What do I know?)	PLAN (What strategy will I use?)
That there are 0.8 meter of space and there are 15 shoes	I am going to do 0.8 tenths x 15.

SOLVE	EXPLAIN
0.8 x 15 = 12 length	I did 0.8 x 15 and 12 is my Product so they need 12 meters.

SOLVE:

$0.8 \times 15 = 12$ length

Space

1	2
3	4	5
6	7	8	9
10	11	12

EXPLAIN:

I did 0.8 x 15 and 12 is my Product so they need 12 meters.

My answer: 12 meters

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0.8

15

36 in is one meter

$\frac{0.8}{8}$
$\frac{8}{10}$
$\frac{80}{100}$

0.8 × 10 + 5

	10	0.8
0.8	0.8	× 5
	0.80	0.40

0.80
+0.40
1.20