

Making Diagrams

NCTM Standards 2, 8, 10

Draw a diagram to illustrate each situation.

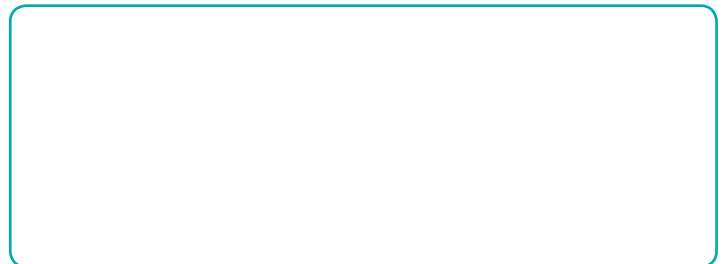
- 1 There were P people standing in line to buy movie tickets.



- 2 There were P people standing in line and then my friend and I got in line, too.



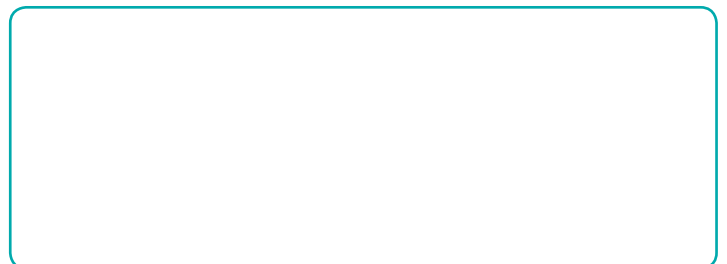
- 3 John put on a puppet show for his family. He set out a row of 5 chairs for them to sit in.



- 4 John decided to invite some friends, too, so he added some rows. Every row had 5 chairs.



- 5 John's mother invited a few of her friends. She added 2 chairs to each row.



6 Fill in the table below to match the diagrams with the shorthand.

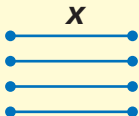
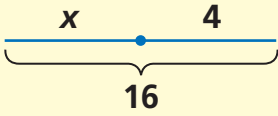
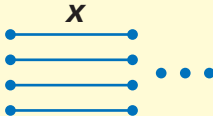
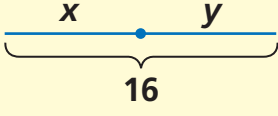
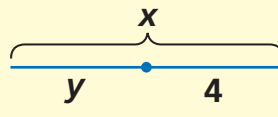
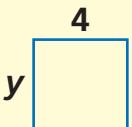
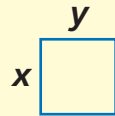
<p>A</p> 	<p>B</p> 	<p>M $x + y = 16$</p>	<p>N $4x$</p>
<p>C</p> 	<p>D</p> 	<p>O $x + 4 = 16$</p>	<p>P $y + 4 = x$</p>
<p>E</p> 	<p>F</p> 	<p>Q $4x + 3$</p>	<p>R xy</p>
<p>G</p> 		<p>S $4y$</p>	

Diagram	A	B	C	D	E	F	G
Shorthand							

Pick a diagram from above that represents the situation.

7 Jennifer arranged some chairs into 4 rows. Each row had the same number of chairs.

Diagram _____

8 Misao laid two boards together, end-to-end. One of the boards was 4 feet long. How long were they together?

Diagram _____

9 **Challenge** Write a situation that fits Diagram C.
