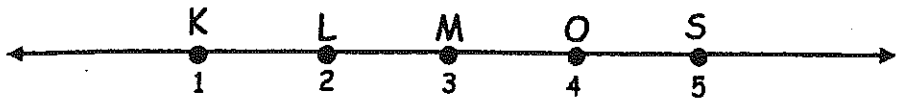
Subsets of Lines - Algebraic Connections

Let the coordinates of K, L, M, O, and S be respectively 1, 2, 3, 4, and 5. Select the best answer from the list on the right for the problems on the left. Answers can be used more than once. If an answer is not used, write the subset of the line that it describes or explain why it doesn't exist.



_____1. $\overline{KL}$

_____2. $\overrightarrow{KL}$

_____3. $\overrightarrow{OM}$

_____4. $\overrightarrow{MO}$

_____5. $\overline{MO}$

_____6. $\overrightarrow{KS}$

_____7. M

_____8. $\overrightarrow{LO}$

_____9. $\overrightarrow{OS}$

_____10. K

a. $x \geq 1$

b. $x \leq 2$

c. $x = 1$

d. $1 \leq x \leq 2$

e. $2 \leq x \leq 5$

f. $x < 2$

g. $x \geq 3$

h. $x \leq 4$

i. $3 \leq x \leq 4$

j. $x \geq 4$

k. $x \geq 2$

l. $x = 3$

If A(-5), B(-1), C(4), and D(7), then name the subset of the line represented by each set.

_____11. $-1 \leq x \leq 4$

_____12. $x \leq -1$

_____13. $-1 \geq x \geq -5$

_____14. $x \geq -5$

_____15. $-5 \leq x \leq 7$

_____16. $x \geq 4$

_____17. $4 \geq x \geq -1$

_____18. $x \leq 4$