Name: _____

Geometry

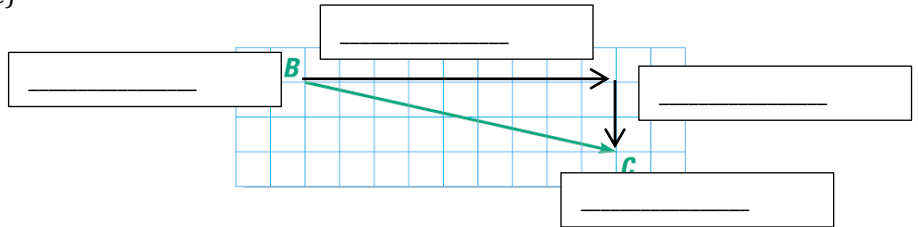## 4.1 Translations

Vector ($\overrightarrow{BC}$)

Measurement with _____ and _____ (size)
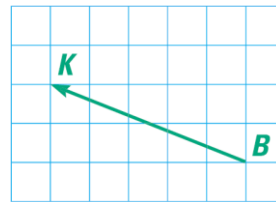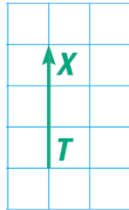
Represented by an _____

Component form ⟨_____, _____⟩
$\overrightarrow{BC}$ = ⟨_____, _____⟩

_____

_____   B

_____

C

_____

Name the vector and write its component form

R ——→ S

X
T

K
B
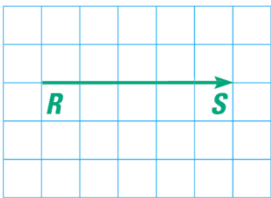
Transformation

_____ or _____ a figure
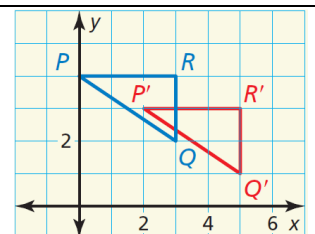Original called _____ (i.e. ΔABC)
New called _____ (i.e. $\Delta A'B'C'$)

Translation

_____ every point the same _____ in the same _____
$(x,y) \rightarrow$ _____
        Where _____ is the translation _____

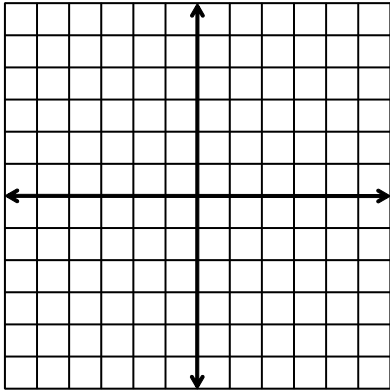The vertices of ΔLMN are L(2, 2), M(5, 3), N(9, 1). Translate ΔLMN using vector ⟨−2,6⟩.

Write a rule for the translation of ΔPQR to $\Delta P'Q'R'$.

y
P   R
    P'   R'
2
        Q
            Q'
    2   4   6 x

Draw ΔRST with vertices $R(2, 2)$, $S(5, 2)$, and $T(3, -2)$. Find the image of each vertex after the translation $(x, y) \rightarrow (x + 1, y + 2)$. Graph the image using prime notation.

Rigid Motion

Transformation that preserves _____ and _____ _____.

A _____ transformation

Translation Theorem

A translation is a _____.

Composition of Transformations

- _____ or _____ transformations _____ into a _____ transformation

Composition Theorem

A composition of two (or more) _____ is a _____.

Graph $\overline{RS}$ with endpoints $R(-8, 5)$ and $S(-6, 8)$. Graph its image after the composition.

Translation: $(x, y) \rightarrow (x - 1, y + 4)$

Translation: $(x, y) \rightarrow (x + 4, y - 6)$

Assignment: 172 #2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 32, 42, 43, 44, 48, 52 = 20