

4 - 2 - Geometry Scot Foresman Integrated Math

Agenda

Objective: SWBAT...Discover the properties preserved by the reflection postulate

- 1) Take out HW to be checked
- 2) Do Now - (Preservation Properties) Reflection Postulate
Teaching Aid 38
- 3) Think Pair Share -
Teaching Aid 39
- 4) Practice Worksheet:
Lesson Master 4-2 B

HW: Lesson Master 4-1 B

DO NOW: Teaching Aid 38

Teaching Aid 38

Exploration: The Reflection Postulate

Reflect ABCD over the line given. Then, answer the questions below.

- A) **Angle Measure:** Using a protractor, measure each of the angles in ABCD. Then, measure each of the angles in A'B'C'D'.

$m\angle A$	$m\angle A'$
$m\angle B$	$m\angle B'$
$m\angle C$	$m\angle C'$
$m\angle D$	$m\angle D'$

***What conclusion can you draw?:**
When figures are reflected...

- B) **Betweenness:**

Plot a point, E, anywhere between A and B. Now, reflect E. Is E' between A' and B'? _____
 Plot a point, F, anywhere between B and C. Now, reflect F. Is F' between B' and C'? _____
 Plot a point, G, anywhere between C and D. Now, reflect G. Is G' between C' and D'? _____
 Plot a point, H, anywhere between D and A. Now, reflect H. Is H' between D' and A'? _____

***What conclusion can you draw?:**
When figures are reflected...

- C) **Collinearity:**

Are points A, E, B collinear? _____ What about their images? _____
 Are points F, B, C collinear? _____ What about their images? _____
 Are points G, C, D collinear? _____ What about their images? _____
 Are points H, D, A collinear? _____ What about their images? _____

***What conclusion can you draw?:**
When figures are reflected...

- D) **Distance:** Measure each of the following distances with a ruler.

AB	$A'B'$
BC	$B'C'$
CD	$C'D'$
DA	$D'A'$

***What conclusion can you draw?:**
When figures are reflected...

- E) How many images does each point on ABCD have? How many pre-images does each point on A'B'C'D' have?

***What conclusion can you draw?:**
When figures are reflected...

- F) **Orientation:**

When you trace the order of the vertices in ABCD, what is their orientation?
 When you trace the order of the vertices in A'B'C'D', what is their orientation?

***What conclusion can you draw?:**
When figures are reflected...

Think...Pair...Share
Teaching Aid 39

Name _____

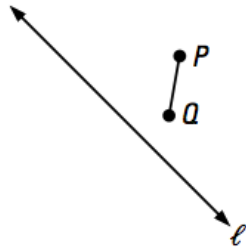
**LESSON
MASTER**

**4-2
A**

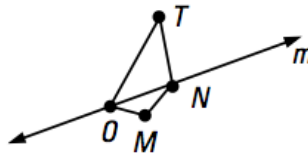
Questions on SPUR Objectives
See pages 238–241 for objectives.

Skills Objectives A and B

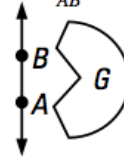
1. Draw $r_\ell(\overline{PQ})$.



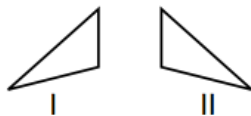
2. Draw $r_m(\triangle TOMN)$.



3. Draw $r_{\overleftrightarrow{AB}}(G)$.



4. Draw the reflecting line such that figure II is the image of figure I over that line.



5. Draw and label a figure for this condition $r_{\overleftrightarrow{AB}}(\text{SAME}) = \text{PANT}$

Properties Objective E

6. *True or false.* Reflections preserve angle measure, distance, and orientation. _____

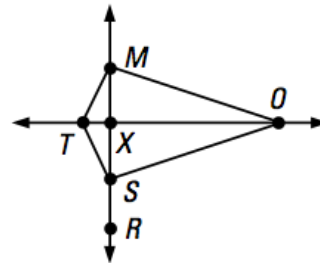
7. In the figure at the right, $r_{\overleftrightarrow{OT}}(\triangle MOT) = \triangle SOT$.

a. If $m\angle MOT = 19$, then $m\angle MOS =$ _____ .

b. $m\angle MXO =$ _____ .

c. If $MS = 10.1''$, then $MX =$ _____ = _____ .

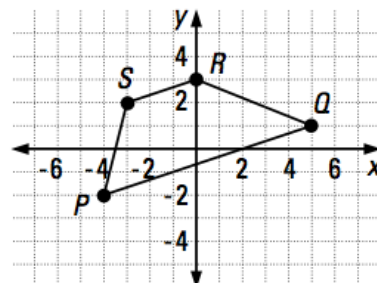
d. If $MT = 12''$, then $TS =$ _____ .



Representations Objective K

8. a. Draw $r_{y\text{-axis}}(\triangle PQR)$.

b. List the coordinates of the vertices of $r_{x\text{-axis}}(\triangle PQR)$.



Name _____

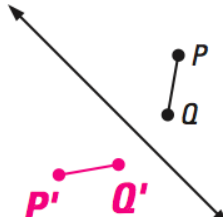
LESSON MASTER

**4-2
A**

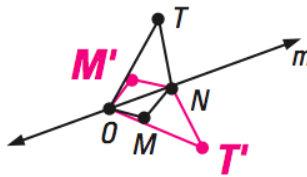
Questions on SPUR Objectives
See pages 238–241 for objectives.

Skills Objectives A and B

1. Draw $r_{\ell}(\overline{PQ})$.



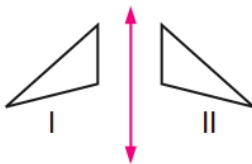
2. Draw $r_m(\triangle TOMN)$.



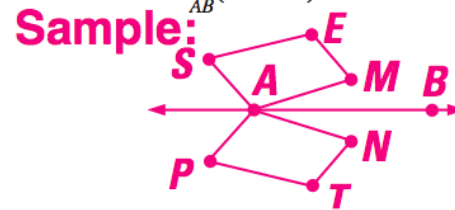
3. Draw $r_{\overleftrightarrow{AB}}(G)$.



4. Draw the reflecting line such that figure II is the image of figure I over that line.



5. Draw and label a figure for this condition $r_{\overleftrightarrow{AB}}(\text{SAME}) = \text{PANT}$



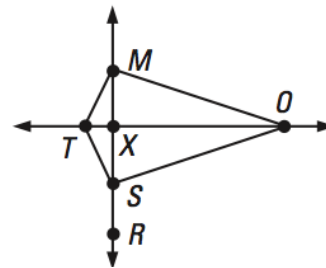
Properties Objective E

6. True or false. Reflections preserve angle measure, distance, and orientation.

false

7. In the figure at the right, $r_{\overleftrightarrow{OT}}(\triangle MOT) = \triangle SOT$.

- a. If $m\angle MOT = 19$, then $m\angle MOS = \underline{38}$.
- b. $m\angle MXO = \underline{90}$.
- c. If $MS = 10.1''$, then $MX = \underline{SX} = \underline{5.05''}$.
- d. If $MT = 12''$, then $TS = \underline{12''}$.

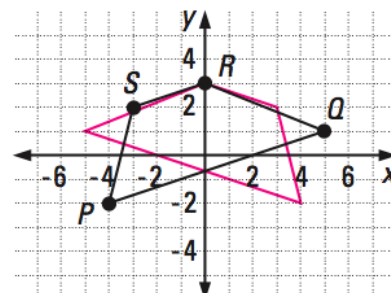


Representations Objective K

8. a. Draw $r_{y\text{-axis}}(PQRS)$.

b. List the coordinates of the vertices of

- $r_{x\text{-axis}}(PQRS)$.
- $P' = (-4, 2)$ $Q' = (5, -1)$**
 $R' = (0, -3)$ $S' = (-3, -2)$



HW: Lesson Master 4-1 B