Chapter 9

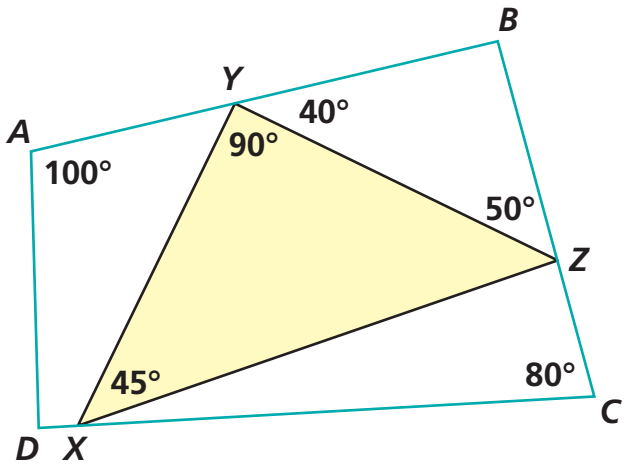
Lesson 8

Name _____ Date _____

# Investigating Quadrilaterals

NCTM Standards 3, 4, 6, 7, 9

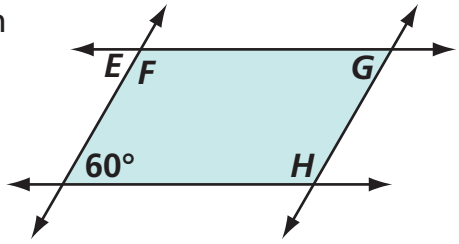
**1** Without using a protractor, find the missing angle measures. (Hint: Use what you know about triangles first, then use what you know about quadrilaterals.)




| Angle | Measure |
|---|---|
| ∠AYX | ° |
| ∠B | ° |
| ∠YZX | ° |
| ∠XZC | ° |
| ∠CXZ | ° |
| ∠DXY | ° |
| ∠D | ° |

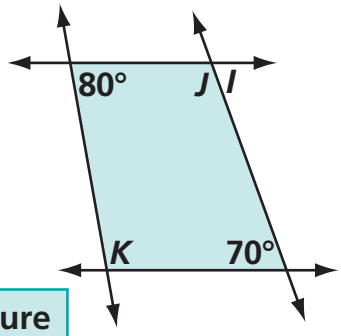
**Without using a protractor, find the missing angle measures in these special quadrilaterals. Use what you know about the quadrilaterals and about angle measures in Z's. For each, you need to find one angle measure outside the quadrilateral.**

**2** Parallelogram




| Angle | Measure |
|---|---|
| ∠E | ° |
| ∠F | ° |
| ∠G | ° |
| ∠H | ° |

**3** Trapezoid




| Angle | Measure |
|---|---|
| ∠I | ° |
| ∠J | ° |
| ∠K | ° |

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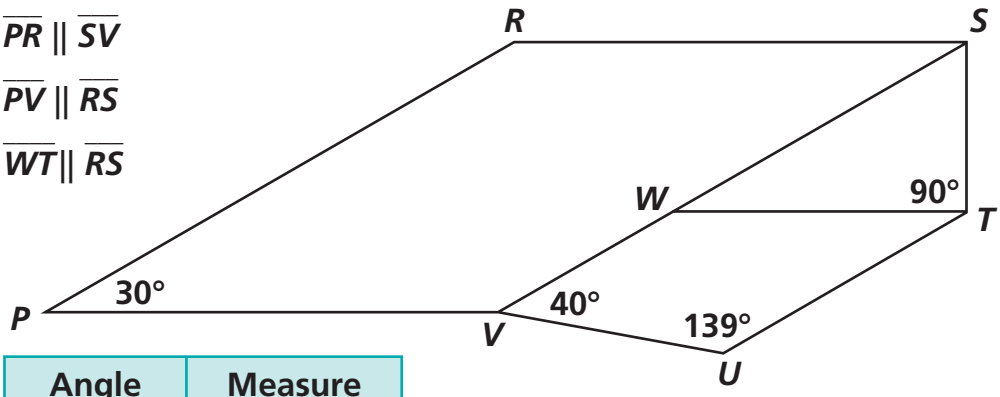
**4** Without a protractor, use your knowledge about Zs, straight angles, opposite angles, and angles in quadrilaterals to figure out the missing angle measures. (There may be other angles you want to find, as well!)

$\overline{PR} \parallel \overline{SV}$

$\overline{PV} \parallel \overline{RS}$

$\overline{WT} \parallel \overline{RS}$




| Angle | Measure |
|---|---|
| ∠*VWT* | ° |
| ∠*SWT* | ° |
| ∠*PRS* | ° |
| ∠*RSW* | ° |
| ∠*TSW* | ° |
| ∠*WTU* | ° |
| ∠*PVW* | ° |

**5** **Challenge** When Jonah said, "Quadrilateral ***STUV*** in the figure above is a trapezoid," Nina disagreed.

"It does look like a trapezoid," she said, "but it can't be. Look at all the angle measures."

Nina is correct! Why isn't Quadrilateral ***STUV*** a trapezoid?

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