**Unit 6 Test Outline**

**Things you should study for the test.**

*The types of Quadrilaterals, along with their properties:

- **Parallelogram**
- **Rectangle**
- **Rhombus**
- **Square**
- **Trapezoid**

*Use the properties of these shapes to solve for variables in problems, as well as briefly explain your steps:

1.)

\[\begin{align*}
2y + 8 \\
5x^* \\
4y + 2
\end{align*}\]

2.)

\[\begin{align*}
x \\
y \\
3 \\
6 \\
70^\circ \\
x^*
\end{align*}\]

3.)

\[\begin{align*}
x^* \\
70^\circ \\
y^*
\end{align*}\]

4.)

\[\begin{align*}
2x^* \\
40^\circ \\
17 \\
5y + 2
\end{align*}\]

Use the properties to also fill in statements for these quadrilaterals:

5.) All parallelograms have two pairs of opposite ______________ that are ______________ and parallel.

6.) In an isosceles trapezoid, two pairs of ______________ and one pair of ______________ are congruent.

7.) The diagonals of a rectangle are ______________ and ______________ each other.

Given a quadrilateral with specific markings, state whether it is a parallelogram or not. Explain your reasoning on each.

8.)

\[\begin{align*}
&\text{____________________________}_
\end{align*}\]

\[\begin{align*}
&\text{____________________________}_
\end{align*}\]
9.)

*Make sure you are prepared for more proofs:

Given: $\overline{AB} \cong \overline{DC}$; $\overline{AB} // \overline{DC}$

Prove: Quad ABCD is a Parallelogram

<table>
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<tr>
<th>Statements</th>
<th>Reasons</th>
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<td>1.</td>
<td>1.</td>
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<tr>
<td>2. Draw $\overline{AC}$</td>
<td>2.</td>
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<tr>
<td>3. $\angle DCA \cong \angle BAC$</td>
<td>3. If // lines ACBAT,</td>
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<td>4. $\overline{AC}$</td>
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<td>5. $\triangle DAC \cong \triangle BCA$</td>
<td>5.</td>
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<td>6. $\angle DAC \cong \angle BCA$</td>
<td>6.</td>
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<td>7. $\overline{AD} // \overline{BC}$</td>
<td>7. If 2 lines ACBAT and</td>
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<td>8.</td>
<td>8. Def. of</td>
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Lastly, remember the theorems for parallel lines and triangle congruence:

*Note: These are only to be used in the proof, an NOWHERE ELSE.

- SSS
- SAS
- ASA
- AAS
- (R) HL
- CPCTC

- If // lines ACBAT, then Alt. Int. $\angle$’s are $\cong$

- If lines ACBAT and Alt. Int. $\angle$’s are $\cong$, then the lines are $//$. 