Angles – Vertical, Adjacent, Complementary, & Supplementary

Standard: MA.7.GM.4

I can identify **vertical**, **adjacent**, **complementary**, and **supplementary** angles.

I can solve real-world problems involving these angles.
### Angles – Vertical, Adjacent, Complementary, & Supplementary

**Vocabulary (symbols)**

- **Ray** – part of a line with one endpoint (side of the angle)
- **Vertex** – common endpoint of the rays
- **Angle** – formed by two rays that have a common endpoint
- **Sides** – the rays that form the angle
- **Congruent** – same size
- **Degree** – the unit of measurement of angles

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**Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms**
Angles – Vertical, Adjacent, Complementary, & Supplementary

Vocabulary (symbols)

**Protractor** – the tool used to measure angles

**Acute** – an angle whose measure is less than 90 degrees

**Right** – an angle whose measure is 90 degrees

**Obtuse** – an angle whose measure is greater than 90 degrees and less than 180 degrees

**Straight** – an angle whose measure is 180 degrees

Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms
Angles – Vertical, Adjacent, Complementary, & Supplementary

Vocabulary

Name the angle

_____

_____

_____

Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms
Vocabulary

**Vertical >’s** – a pair of nonadjacent angles formed by a pair of intersecting lines. Vertical angles have the same measure.

**Adjacent >’s** – angles that share a common side and vertex. (neighbors)
Angles – Vertical, Adjacent, Complementary, & Supplementary

Vocabulary

**Complementary >’s** – two angles whose measures total 90 degrees.

**Supplementary >’s** – two angles whose measures total 180 degrees.
Adjacent <‘s

Vertical <‘s

Supplementary >’s

Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms
<table>
<thead>
<tr>
<th>Angle Measure</th>
<th>Complement/Supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>36°</td>
<td>complement</td>
</tr>
<tr>
<td>145°</td>
<td>supplement</td>
</tr>
<tr>
<td>19°</td>
<td>supplement</td>
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<tr>
<td>45°</td>
<td>complement</td>
</tr>
<tr>
<td>75°</td>
<td>complement</td>
</tr>
</tbody>
</table>

Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms
Example 1:

Solve for \( x \). Show the equation and work.

Unit #6: Angles, Triangles, Circles, Cylinders, & Rectangular Prisms
Example 2:

Solve for $x$. Show the equation and work.
Example 3:

Solve for x. Show the equation and work.
Example 4:

Solve for $x$. Show the equation and work.