

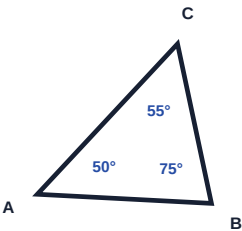
Order Triangle Sides

Use the angle measures to order the opposite sides from longest to shortest or identify the longest and shortest sides.

Section 1: Order all sides

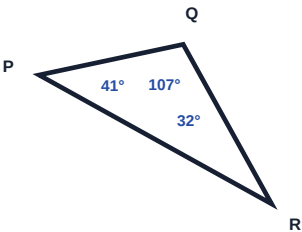
Write the complete order from largest to smallest. Use the opposite side-angle relationship.

1. Order the sides of triangle ABC from longest to shortest.



Largest to smallest:  
\_\_\_\_\_  
\_\_\_\_\_

2. Order the sides of triangle PQR from longest to shortest.



Largest to smallest:  
\_\_\_\_\_  
\_\_\_\_\_

3. Order the sides of triangle XYZ from longest to shortest.

Angle X = 46°, Angle Y = 98°, Angle Z = 36°

Largest to smallest:  
\_\_\_\_\_  
\_\_\_\_\_

4. Order the sides of triangle JKL from longest to shortest.

Angle J = 95°, Angle K = 29°, Angle L = 56°

Largest to smallest:  
\_\_\_\_\_  
\_\_\_\_\_

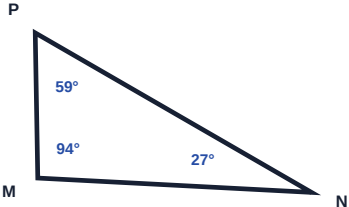
Order Triangle Sides

Use the angle measures to order the opposite sides from longest to shortest or identify the longest and shortest sides.

Section 2: Name the longest and shortest sides

Identify both extremes from the opposite side-angle relationship.

5. Name the longest and shortest sides of triangle MNP.

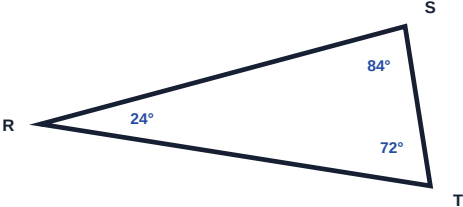


Largest: \_\_\_\_\_

Smallest: \_\_\_\_\_

\_\_\_\_\_

6. Name the longest and shortest sides of triangle RST.



Largest: \_\_\_\_\_

Smallest: \_\_\_\_\_

\_\_\_\_\_

7. Name the longest and shortest sides of triangle DEF.

Angle D = 69°, Angle E = 80°, Angle F = 31°

Largest: \_\_\_\_\_

Smallest: \_\_\_\_\_

\_\_\_\_\_

8. Name the longest and shortest sides of triangle UVW.

Angle U = 57°, Angle V = 96°, Angle W = 27°

Largest: \_\_\_\_\_

Smallest: \_\_\_\_\_

\_\_\_\_\_

## Order Triangle Sides

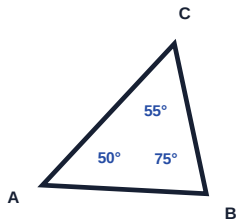
### Worked Answer Key

Use the angle measures to order the opposite sides from longest to shortest or identify the longest and shortest sides.

#### Section 1: Order all sides

Write the complete order from largest to smallest. Use the opposite side-angle relationship.

##### 1. Order the sides of triangle ABC from longest to shortest.



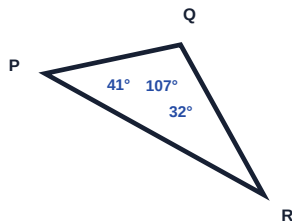
Angle order: Angle B ( $75^\circ$ ) > Angle C ( $55^\circ$ ) > Angle A ( $50^\circ$ ).

Opposite sides: Angle B  $\leftrightarrow$  AC, Angle C  $\leftrightarrow$  AB, Angle A  $\leftrightarrow$  BC.

Side order: AC > AB > BC.

**AC > AB > BC**

##### 2. Order the sides of triangle PQR from longest to shortest.



Angle order: Angle Q ( $107^\circ$ ) > Angle P ( $41^\circ$ ) > Angle R ( $32^\circ$ ).

Opposite sides: Angle Q  $\leftrightarrow$  PR, Angle P  $\leftrightarrow$  QR, Angle R  $\leftrightarrow$  PQ.

Side order: PR > QR > PQ.

**PR > QR > PQ**

##### 3. Order the sides of triangle XYZ from longest to shortest.

**Angle X =  $46^\circ$ , Angle Y =  $98^\circ$ , Angle Z =  $36^\circ$**

Angle order: Angle Y ( $98^\circ$ ) > Angle X ( $46^\circ$ ) > Angle Z ( $36^\circ$ ).

Opposite sides: Angle Y  $\leftrightarrow$  XZ, Angle X  $\leftrightarrow$  YZ, Angle Z  $\leftrightarrow$  XY.

Side order: XZ > YZ > XY.

**XZ > YZ > XY**

##### 4. Order the sides of triangle JKL from longest to shortest.

**Angle J =  $95^\circ$ , Angle K =  $29^\circ$ , Angle L =  $56^\circ$**

Angle order: Angle J ( $95^\circ$ ) > Angle L ( $56^\circ$ ) > Angle K ( $29^\circ$ ).

Opposite sides: Angle J  $\leftrightarrow$  KL, Angle L  $\leftrightarrow$  JK, Angle K  $\leftrightarrow$  JL.

Side order: KL > JK > JL.

**KL > JK > JL**

## Order Triangle Sides

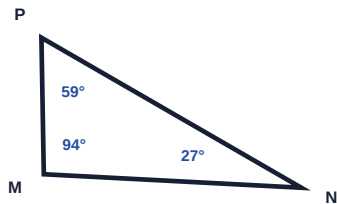
### Worked Answer Key

Use the angle measures to order the opposite sides from longest to shortest or identify the longest and shortest sides.

### Section 2: Name the longest and shortest sides

Identify both extremes from the opposite side-angle relationship.

#### 5. Name the longest and shortest sides of triangle MNP.



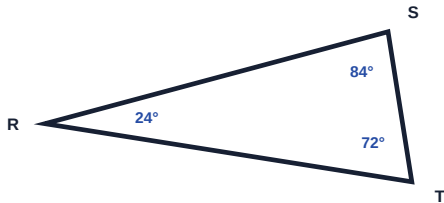
Angle order: Angle M ( $94^\circ$ ) > Angle P ( $59^\circ$ ) > Angle N ( $27^\circ$ ).

Opposite sides: Angle M  $\leftrightarrow$  NP, Angle P  $\leftrightarrow$  MN, Angle N  $\leftrightarrow$  MP.

Side order: NP > MN > MP.

**Largest: NP    Smallest: MP**

#### 6. Name the longest and shortest sides of triangle RST.



Angle order: Angle S ( $84^\circ$ ) > Angle T ( $72^\circ$ ) > Angle R ( $24^\circ$ ).

Opposite sides: Angle S  $\leftrightarrow$  RT, Angle T  $\leftrightarrow$  RS, Angle R  $\leftrightarrow$  ST.

Side order: RT > RS > ST.

**Largest: RT    Smallest: ST**

#### 7. Name the longest and shortest sides of triangle DEF.

**Angle D =  $69^\circ$ , Angle E =  $80^\circ$ , Angle F =  $31^\circ$**

Angle order: Angle E ( $80^\circ$ ) > Angle D ( $69^\circ$ ) > Angle F ( $31^\circ$ ).

Opposite sides: Angle E  $\leftrightarrow$  DF, Angle D  $\leftrightarrow$  EF, Angle F  $\leftrightarrow$  DE.

Side order: DF > EF > DE.

**Largest: DF    Smallest: DE**

#### 8. Name the longest and shortest sides of triangle UVW.

**Angle U =  $57^\circ$ , Angle V =  $96^\circ$ , Angle W =  $27^\circ$**

Angle order: Angle V ( $96^\circ$ ) > Angle U ( $57^\circ$ ) > Angle W ( $27^\circ$ ).

Opposite sides: Angle V  $\leftrightarrow$  UW, Angle U  $\leftrightarrow$  VW, Angle W  $\leftrightarrow$  UV.

Side order: UW > VW > UV.

**Largest: UW    Smallest: UV**