

## Geometry: Special Angle Pairs Notes/Activity

The central star shape has six arrows pointing to the following diagrams:

- Heart Shape:**
  - Left side: A point with three rays. The top-left angle is  $293^\circ$ . The top-right angle is  $(x-12)^\circ$ . The bottom-right angle is  $31^\circ$ .
  - Right side: A vertex  $A$  with four rays  $AB$ ,  $AC$ ,  $AD$ , and a horizontal ray. The angle between  $AB$  and  $AC$  is  $32^\circ$ . The angle between  $AC$  and  $AD$  is  $58^\circ$ . The angle between  $AD$  and the horizontal ray is labeled with a red question mark  $?$ .
- Top Polygon:**
  - Top edge: A horizontal line with a ray extending upwards and to the right. The angle between the horizontal line and the ray is  $53^\circ$ . The angle between the ray and the top edge is  $(5x+3)^\circ$ .
  - Bottom edge: A horizontal line with a ray extending upwards and to the left. The angle between the horizontal line and the ray is  $133^\circ$ . The angle between the ray and the bottom edge is  $x$ .
- Right Polygon:**
  - Top edge: A horizontal line with points  $A$ ,  $B$ , and  $C$  marked. A ray  $BD$  extends upwards and to the left from point  $B$ . The angle between  $BD$  and  $BC$  is  $121^\circ$ . The angle between  $BD$  and  $BA$  is labeled with a red question mark  $?$ .
  - Bottom edge: A horizontal line with points  $A$ ,  $B$ , and  $C$  marked. A ray  $BD$  extends upwards and to the left from point  $B$ . The angle between  $BD$  and  $BC$  is  $(3q+6)^\circ$ . The angle between  $BD$  and  $BA$  is  $(7q-46)^\circ$ .
- Bottom-Left Polygon:**
  - Top edge: A horizontal line with a ray extending upwards and to the right. The angle between the horizontal line and the ray is  $75^\circ$ . The angle between the ray and the top edge is  $x$ .
  - Bottom-left corner: A right angle symbol is shown between two rays. One ray is labeled  $x+4$  and the other is labeled  $3x+2$ .
- Bottom-Right Polygon:**
  - Top edge: A horizontal line with a ray extending upwards and to the right. The angle between the horizontal line and the ray is  $(3x+7)^\circ$ . The angle between the ray and the top edge is  $(x-2)^\circ$ . The angle between the ray and the horizontal line is  $(5x+4)^\circ$ .
  - Bottom edge: A horizontal line with a ray extending upwards and to the left. The angle between the horizontal line and the ray is  $130^\circ$ . The angle between the ray and the bottom edge is  $x$ .

Name \_\_\_\_\_ Date \_\_\_\_\_ Per \_\_\_\_\_

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