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| **ANGLE PAIRS** |
| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Angles** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Angles** |
| Sum of angle measures is 90o | Sum of angle measures is 180o |
| m∠1 + m∠2 = 90 oIn each pair, ∠1 and ∠2 are complementary. | m∠3 + m∠4 = 180 oIn each pair, ∠3 and ∠4 are supplementary. |



Tell whether each pair of labeled angles is Find the measure of the following angles.

complementary, supplementary, or neither. 1. Complement of ∠S \_\_\_\_\_\_\_\_

 2. Supplement of ∠S \_\_\_\_\_\_\_\_

 3. Complement of ∠R \_\_\_\_\_\_\_

 4. Supplement of ∠R \_\_\_\_\_\_\_\_



**Let’s add some Algebra into this Geometry!**

5. ∠LMN and ∠UVW are complementary. Find the measure of each angle if m∠LMN = (3x+5)o and m∠UVW = 2xo.

**KAHOOT Problems**1. m∠KLM and m∠KLB are complementary. Find 2. m∠ABC and m∠ DBE are supplementary.
the measure of each angle if m∠KLM = xo and Find the measure of each angle if m∠ABC = xo.
m∠KLB = 2xo. and m∠DBE = (x+50)o.

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| **MORE ANGLE PAIRS** |
| **Adjacent Pairs** | **Linear Pairs** | **Vertical Pairs** |
| Have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and share a common side | Adjacent angles whose \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides are opposite rays | Nonadjacent angles formed by two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lines |
| ∠1 & ∠2 are adjacent | ∠3 and ∠4 are adjacent and form a linear pair | ∠5 and ∠6 are vertical angles |

Tell whether ∠7 and ∠8 in each figure are only adjacent, are adjacent and form a linear pair, or are not adjacent.



**Example Problems:** Find the following using the figure shown.

A pair of vertical angles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A linear pair \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

An angle adjacent to ∠4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example 1: A pair of vertical angles are represented by **You Try!** A pair of vertical angles are represented by

the expression (x+30)o and (5x – 10)o. What is the the expression xo and (5x-48)o. What is the measure in

measure in degrees of each angle? degrees of each angle?

**KAHOOT Problems:** Find the value of the variable.
3. 4.

**ANGLE ADDITION POSTULATE:** if a point S lies in the interior of ∠PQR, then ∠PQS + ∠SQR = \_\_\_\_\_\_\_. 

EXAMPLE 1: Find m∠JKL if m∠SKL = 31o EXAMPLE 2: Find m∠IHQ if m∠IHG =

and m∠JKS = 52o. 176O and m∠QHG = 130o.
 

EXAMPLE 3: Find m∠HIW if m∠WIJ = 10x, EXAMPLE 4: m∠ABC = 17x+8, m∠ABK
m∠HIJ = 145o, and m∠HIW = 2x +13. = 42o, and m∠KBC = 12x – 4. Find m∠ABC.

 

**KAHOOT Problems**

5. Find m∠KLU if m∠ULM = 20o and m∠KLM = 110o 6. Find m∠IJA if m∠AJK = 61o and

 m∠IJK = 153o



7. m∠HGF = 16x+4, m∠EGF = 110o, and m∠HGE = 3x+11. 8. m∠VUT = 175o, m∠VUJ = 17x – 3, and
 Find x. m∠JUT = 17x + 8. Find x.

