

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

## Angle Add-Up Game



### Materials

- Number cards 1–8 (4 of each)
- Number cards 0 and 9 (1 of each)
- Dry-erase marker (or pencil)
- Straightedge ruler
- Full-circle protractor (1 per player)

**Players:** 2

### Skills

- Drawing angles of a given measure
- Recognizing angle measures as additive
- Solving addition and subtraction problems to find the measures of unknown angles

**Objective:** To score the most points in three rounds.

### Directions

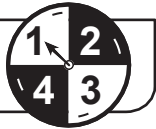
1. Shuffle the cards and place the deck number-side down on the table.
2. In each round, each player draws the number of cards indicated on the record sheet.
3. Each player uses the number cards to fill in the blanks on the record sheet and form angle measures so the unknown angle measure is as large as possible.
4. Players add or subtract to find the measure of the unknown angle and then record the result in the circle on the record sheet. The measure of the unknown angle is the player's score for the round.
5. Each player uses a full-circle protractor, straightedge ruler, and dry-erase marker to show on the record sheet that the angle measure of the whole is the sum of the angle measures of the parts. (For example, if a player draws cards 1, 2, 3, and 4, he or she could make a 31-degree angle and then add a 42-degree angle to end up with a 73-degree angle.)
6. There are three rounds in a game. The player with the largest total number of points at the end of three rounds wins the game.

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## Angle Add-Up Record Sheet



### Game 1

Round 1: Draw 4 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{_____}^\circ \\ m\angle ABC \end{array}$$

Round 2: Draw 2 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{90}^\circ \\ m\angle ABC \end{array}$$

Round 3: Draw 2 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{180}^\circ \\ m\angle ABC \end{array}$$

Total Points = \_\_\_\_\_

### Game 2

Round 1: Draw 4 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{_____}^\circ \\ m\angle ABC \end{array}$$

Round 2: Draw 2 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{90}^\circ \\ m\angle ABC \end{array}$$

Round 3: Draw 2 cards.

$$\begin{array}{c} \text{_____}^\circ \\ m\angle ABD \end{array} + \begin{array}{c} \text{_____}^\circ \\ m\angle DBC \end{array} = \begin{array}{c} \text{180}^\circ \\ m\angle ABC \end{array}$$

Total Points = \_\_\_\_\_