Name:

Identify Pairs of Angles

What You Need

- Label Cards
- Figure Cards

What You Do

1. Place the "congruent" and "supplementary" **Label Cards** side by side on one side of the table. Place the **Label Cards** faceup on the other side of the table. Shuffle the **Figure Cards** and place them in a pile facedown.

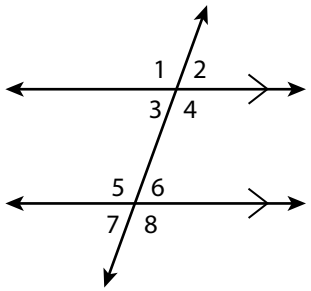
2. Take turns. Draw a **Figure Card**. Then find a **Label Card** that describes the numbered angles.

3. Explain how the measures of the numbered angles are related, if at all.
   - If you have enough information to know whether the angles are congruent or supplementary, place the **Figure Card** with its **Label Card** under either "congruent" or "supplementary."
   - If you do not have enough information, discard the cards.

4. Continue until no cards are left.

Check Understanding

In the figure, $m\angle 1 = 110°$. Identify a pair of corresponding angles, a pair of same-side exterior angles, and a pair of alternate interior angles. What are the measures of the angles in each pair? Explain how you know.

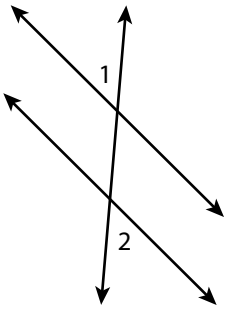


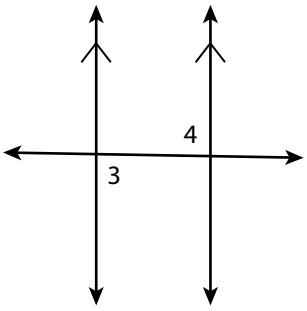
Go Further

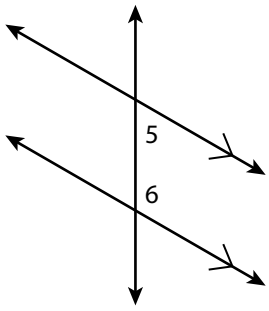
Choose a **Figure Card** and estimate the measure of one of the numbered angles. Use your estimate to calculate the measure of the other numbered angle. Have a partner check your work.

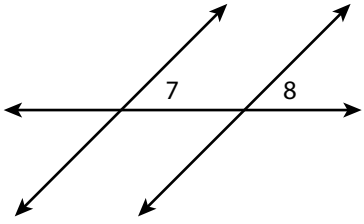
Name:

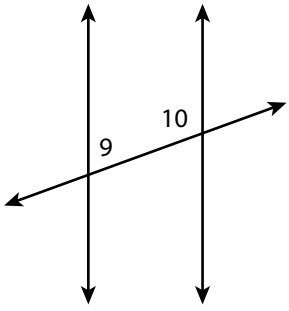
FIGURE CARDS AND LABEL CARDS

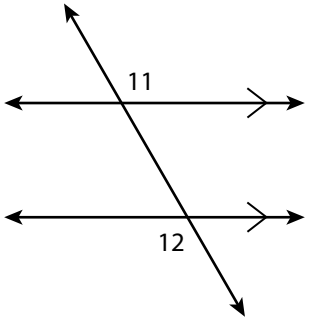


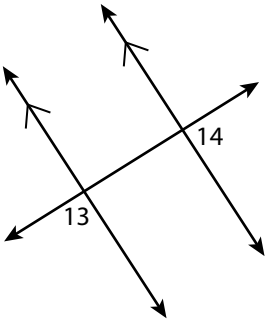


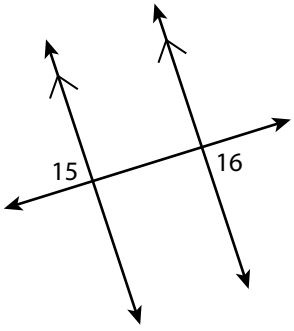


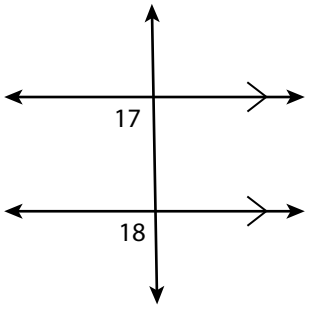


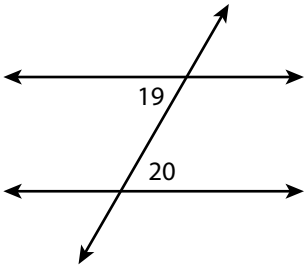


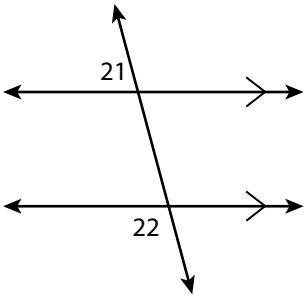


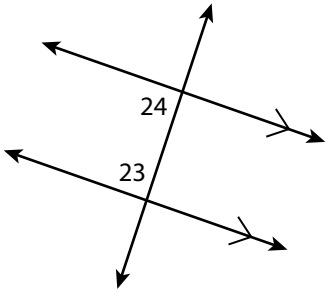


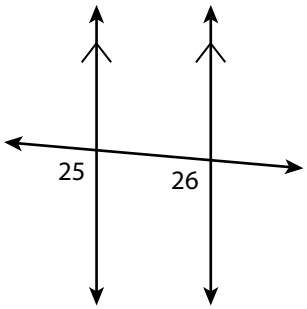
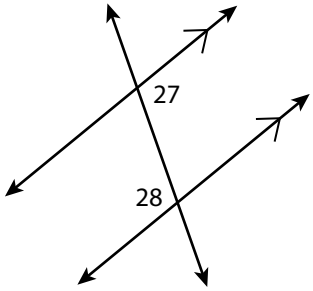
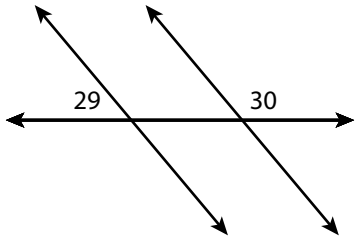










		
alternate exterior angles	**alternate exterior angles**	**alternate exterior angles**
alternate interior angles	**alternate interior angles**	**alternate interior angles**
corresponding angles	**corresponding angles**	**corresponding angles**
same-side exterior angles	**same-side exterior angles**	**same-side exterior angles**
same-side interior angles	**same-side interior angles**	**same-side interior angles**
congruent		
supplementary		

Name:

Similarity Search

What You Need

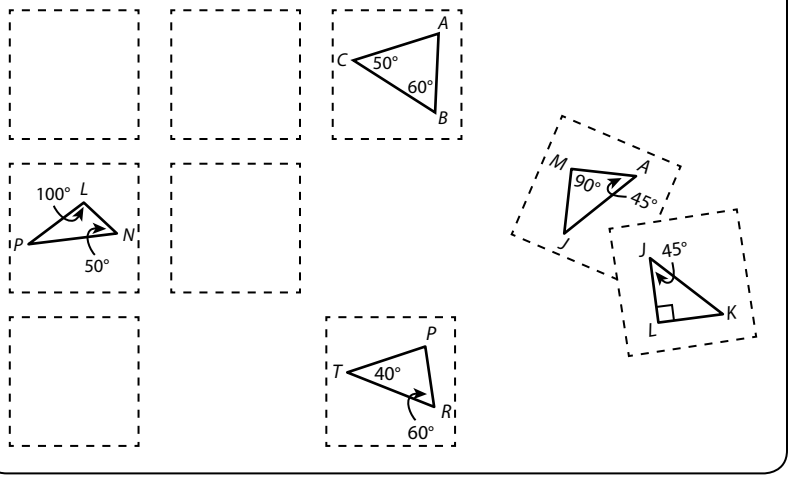
- Triangle Cards

What You Do

1. Place all the **Triangle Cards** facedown. Then flip one card over.

2. Take turns. When it is your turn, flip over a card and compare it to the other cards that are faceup. (If no other cards are faceup, flip over a second card.) If you see two cards that show similar triangles, take both cards. If not, leave all the cards where they are.

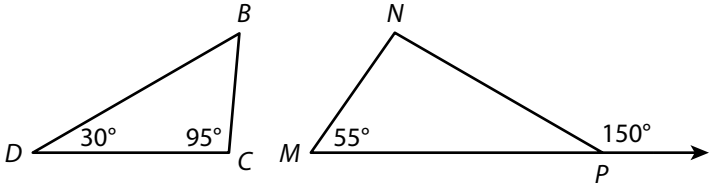
Example



3. Continue until no cards are left. The player with the most cards wins.

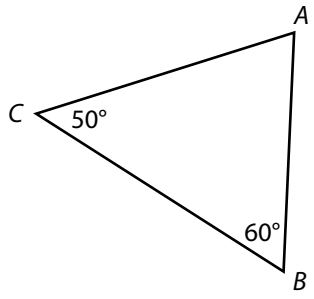
Check Understanding

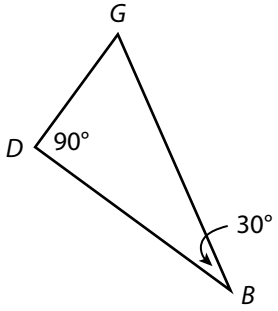
Are the two triangles similar? Explain your reasoning.

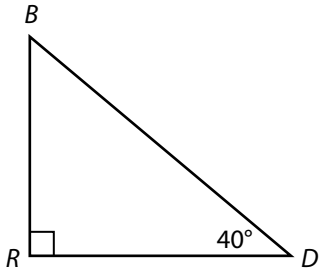


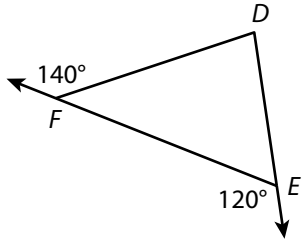
Go Further

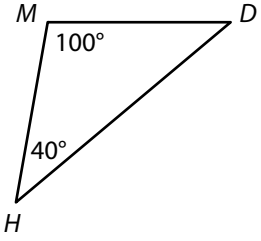
Make six cards of your own that show three pairs of similar triangles. Mix them together with the original cards and play the game again.

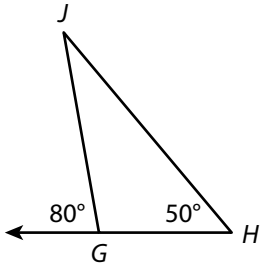


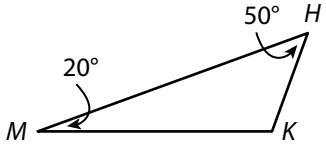


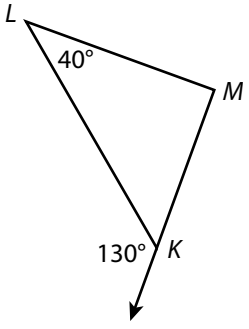


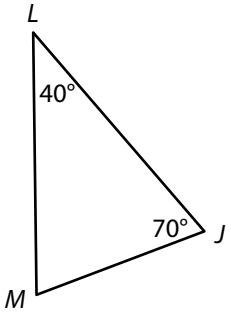


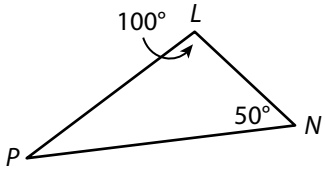


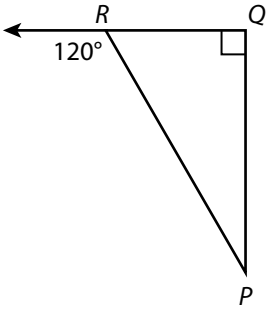


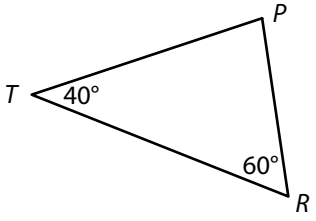


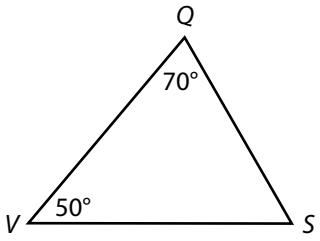


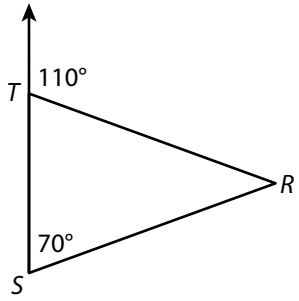


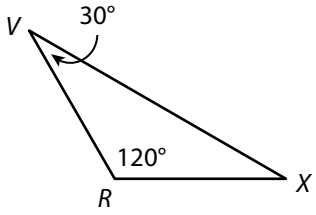


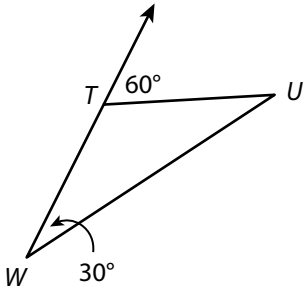


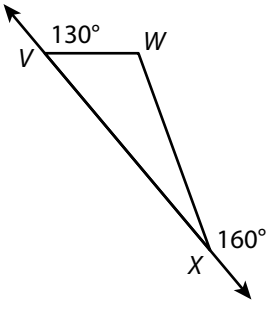


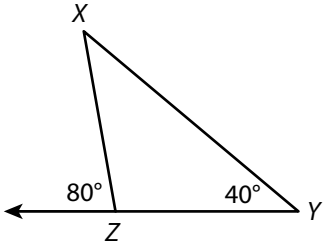












Names:

Find Pythagorean Triples

What You Need

- Score Card, 1 per player
- Game Board
- number cube (1–6)
- counters, 1 of a different color per player

What You Do

KEEP IN MIND . . .
You can use the fact that a multiple of a Pythagorean triple is also a Pythagorean triple.

For example, 10, 24, ____ is a multiple of 5, 12, ____.

1. Give each player a **Score Card**. Each row of the card shows the leg lengths of a Pythagorean triple.
2. Take turns. On your turn, roll the number cube. If possible, write the number rolled in one of the blank spaces on your **Score Card**. Each number you write will be either the ones digit or tens digit of the hypotenuse length for one Pythagorean triple. If there are no blank spaces for the number rolled, your turn is over.
3. When you complete your first Pythagorean triple, have the other players check your work. If you are correct, place your counter on home plate on the **Game Board**. If you are not correct, your turn ends. Each time you complete another triple, move to the next base.
4. The first player to get back to home plate wins.

Check Understanding

Which set of numbers is a Pythagorean triple? Explain.

20, 21, 29	24, 45, 52

Go Further

Find all the Pythagorean triples on your **Score Card** that are multiples of another triple on the card.

Find Pythagorean Triples

Leg Length	Leg Length	Hypotenuse	
		Tens	Ones
3	4	0	
5	12		
6	8		0
7	24		
9	12		
10	24		
12	16		0
14	48		0
15	20		
18	24		0
24	32		0
27	36		
36	48		0

Leg Length	Leg Length	Hypotenuse	
		Tens	Ones
3	4	0	
5	12		
6	8		0
7	24		
9	12		
10	24		
12	16		0
14	48		0
15	20		
18	24		0
24	32		0
27	36		
36	48		0

Leg Length	Leg Length	Hypotenuse	
		Tens	Ones
3	4	0	
5	12		
6	8		0
7	24		
9	12		
10	24		
12	16		0
14	48		0
15	20		
18	24		0
24	32		0
27	36		
36	48		0

Leg Length	Leg Length	Hypotenuse	
		Tens	Ones
3	4	0	
5	12		
6	8		0
7	24		
9	12		
10	24		
12	16		0
14	48		0
15	20		
18	24		0
24	32		0
27	36		
36	48		0

Names:

Find Pythagorean Triples

GAME BOARD