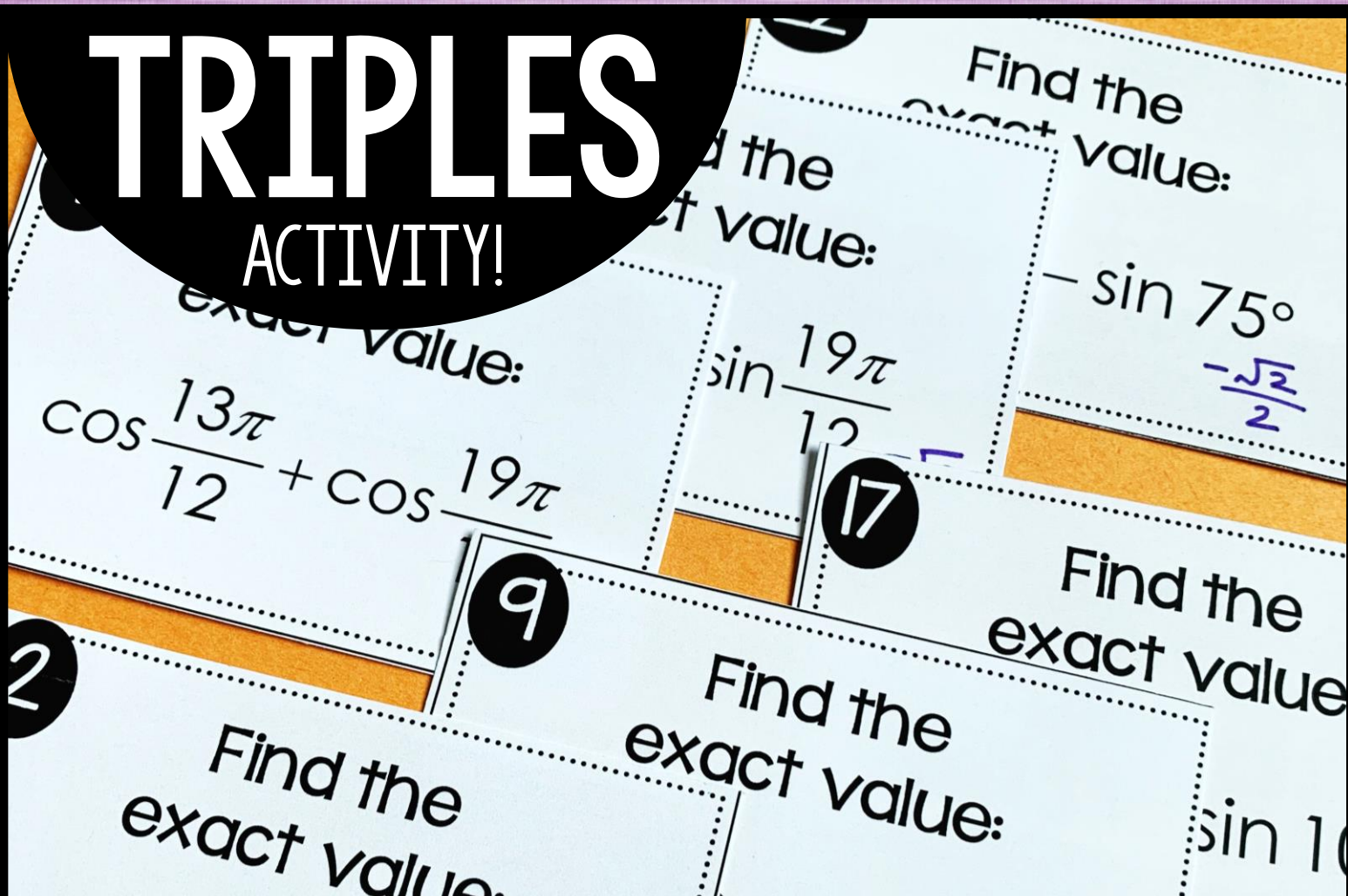


TRIPLES

ACTIVITY!



PRODUCT-SUM

Identities

Created by: ALL THINGS ALGEBRA®

PRODUCT-SUM IDENTITIES

triples activity

Objective: Students will practice using the Product-to-Sum and Sum-to-Product Identities to find exact trigonometric function values. Some angles are given in degrees and others are given in radians.

Description: There are 24 total cards. Once matched, there will be 8 sets of three cards, each with the same answer.

Ways to use this activity:

(1) I recommend that students work in groups of 2-4 for this activity. Print the cards and distribute to each group. They cut out the cards and divide them up between the group members so each person is responsible for certain cards. They can use loose-leaf notebook paper to show their work, or write on the back of the card. Once all cards are solved, they match all the "triples" together. The triples are the cards with the matching answers.

I have my students staple their triples together and place in a zip-lock bag for a grade. Simply write their names on the bag with a sharpie. I provided a simple answer key for you to use to ensure they are matched together correctly.

(2) Use the activity as a means to group students! Give each student one card. Students must look for the two people in the room with a card with the same answer.

SAMPLE TRIPLE:

1 Find the exact value:
 $\cos \frac{13\pi}{12} + \cos \frac{19\pi}{12}$

13 Find the exact value:
 $\sin \frac{25\pi}{12} + \sin \frac{19\pi}{12}$

22 Find the exact value:
 $\sin 165^\circ - \sin 75^\circ$