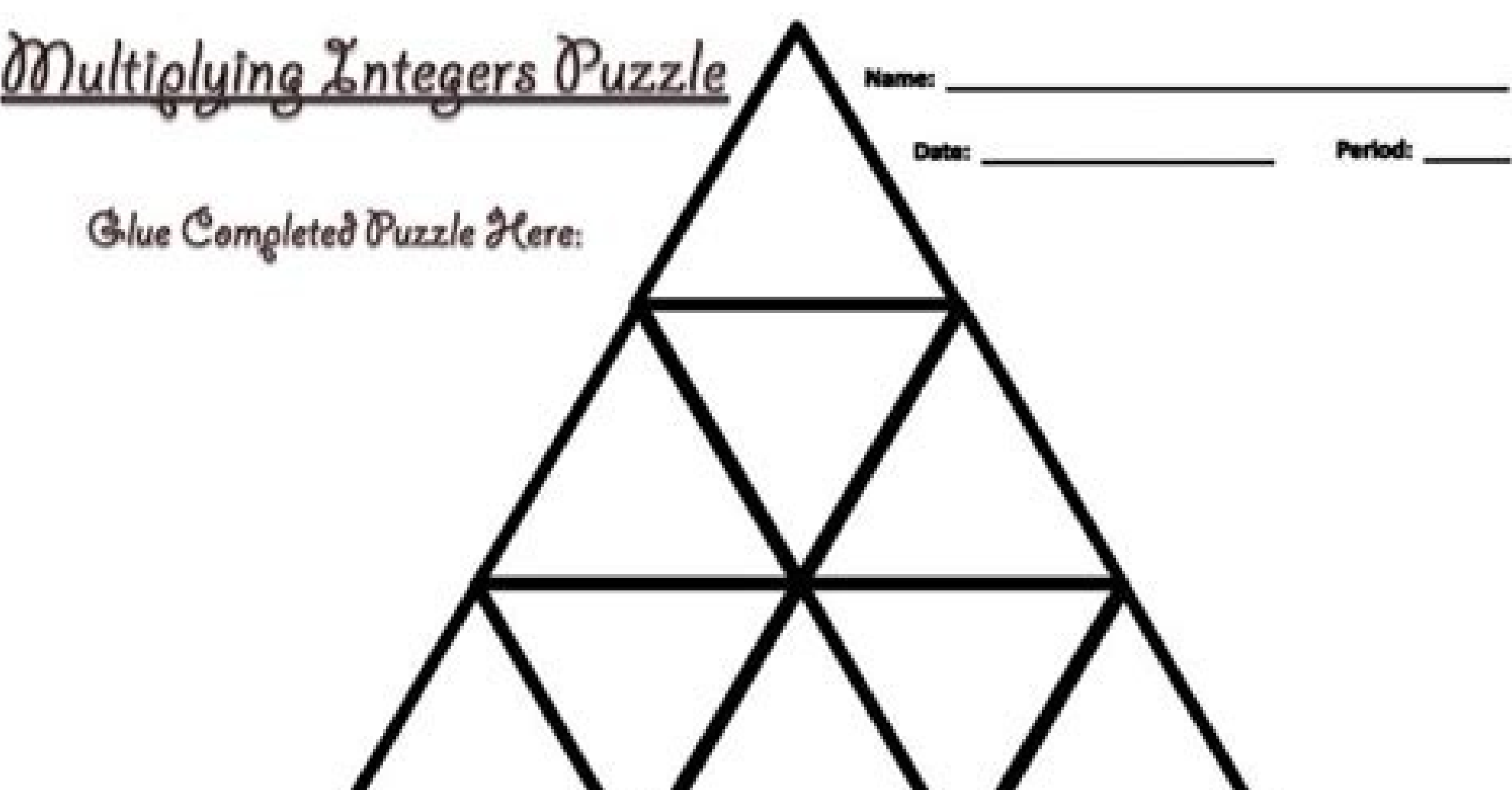
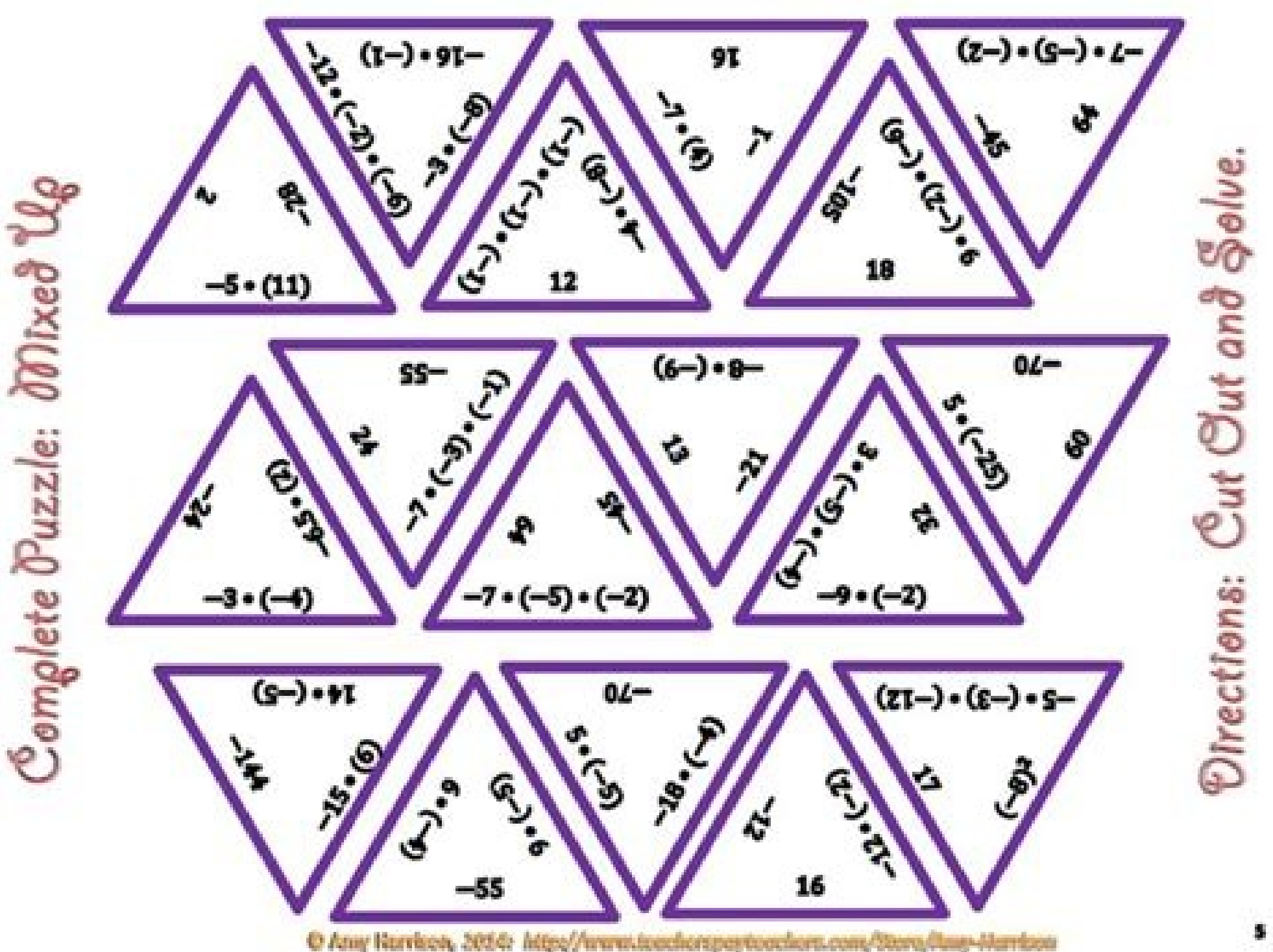
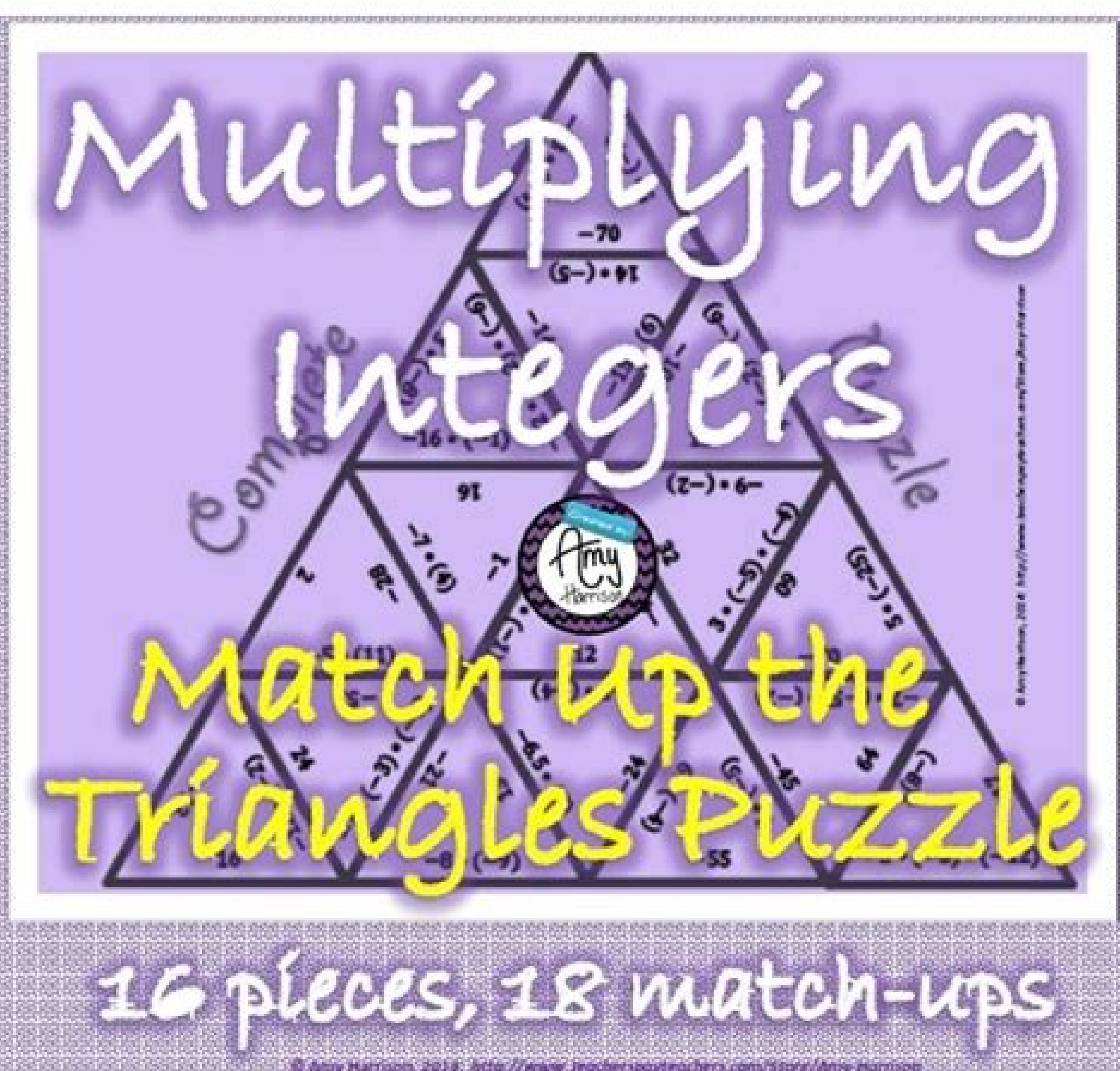
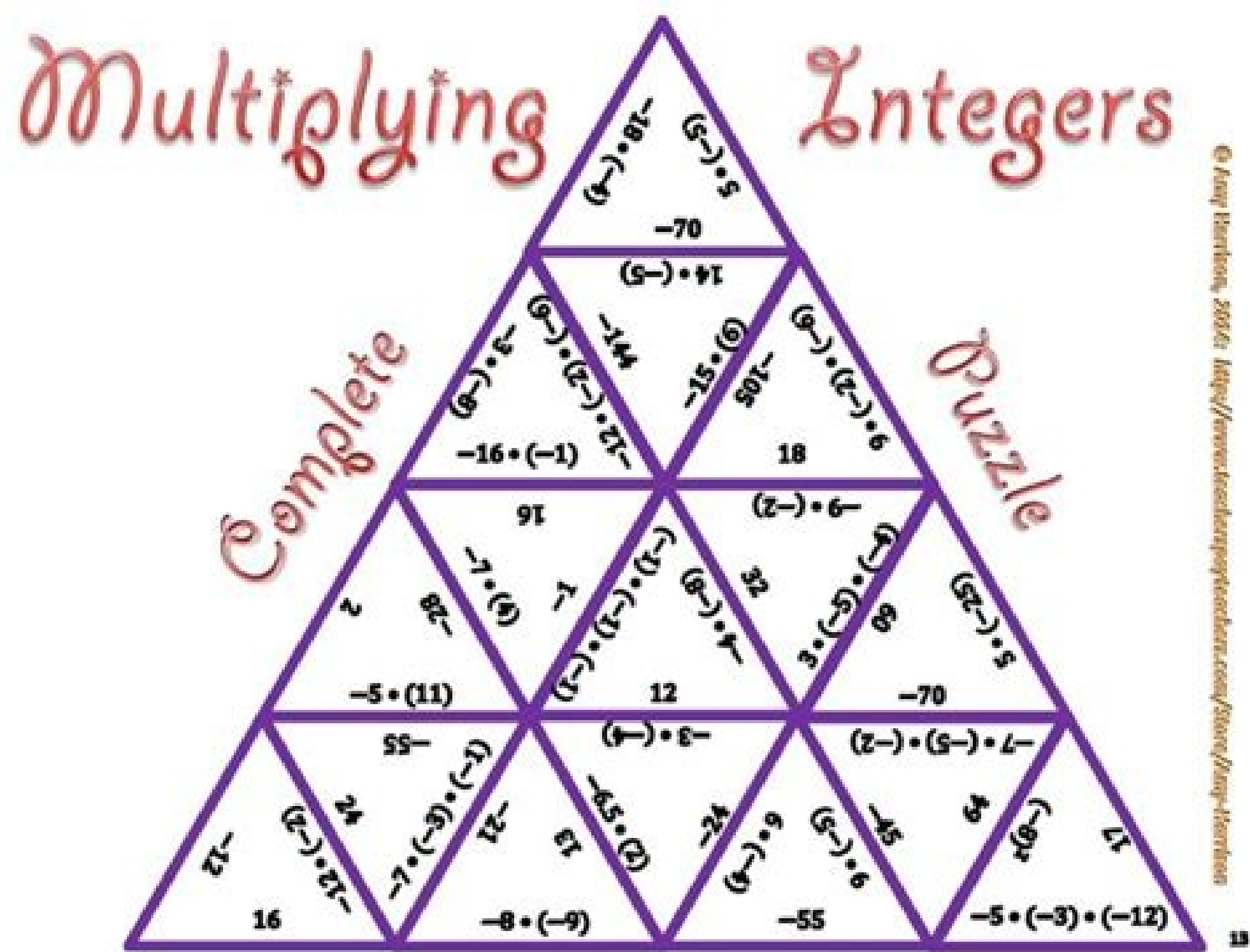


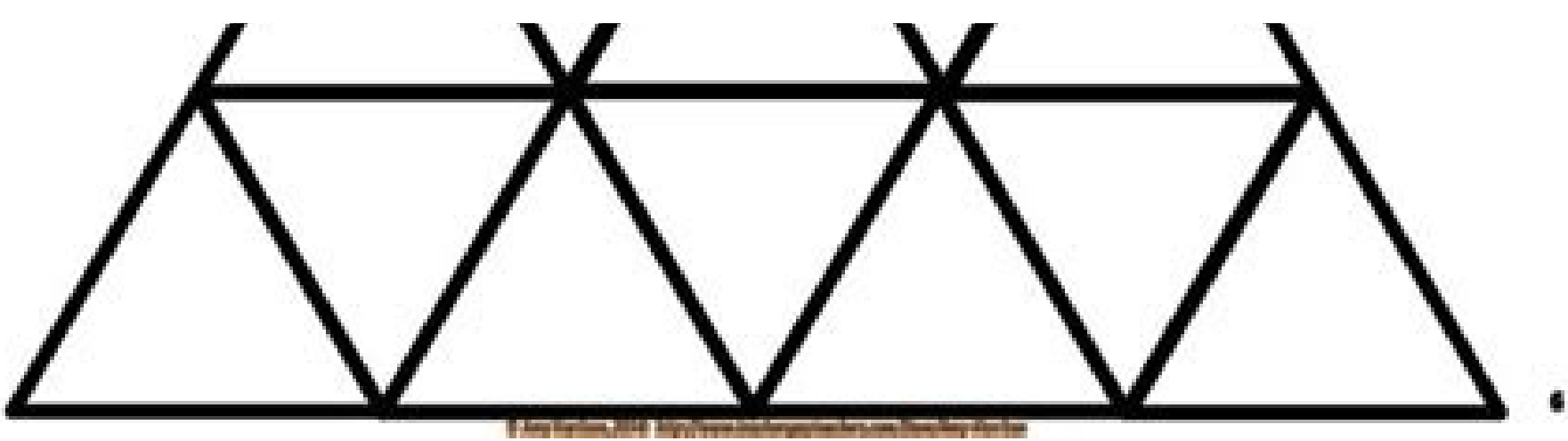
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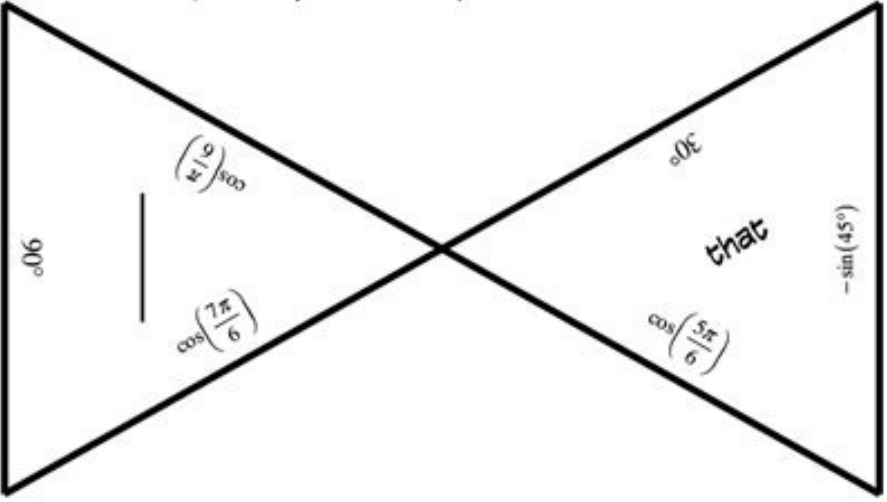




Trig Puzzle

Trig Identities are trigonometric equations that are always true. Students love learning them. To help you figure some of these identities I have created a puzzle. Try to avoid using your calculator during this activity.

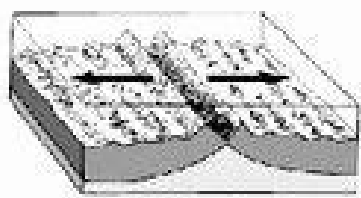
1. Cut out all of the pieces
2. Then use your unit circle and what you know so far about trigonometry to match the equivalent expressions and assemble the puzzle. Take a picture of your masterpiece.
3. Figure out the 6 Trig Identities.
4. Finally, complete the quote and win!



Name _____

Plate Tectonics Worksheet

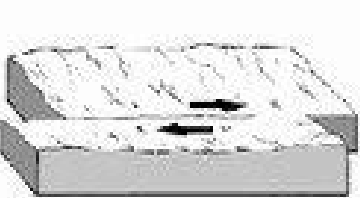
Label each figure by writing the type of plate boundary it shows.



1. _____



2. _____



3. _____

4. In your own words, state the theory of plate tectonics?
5. Describe what happens when two plates carrying oceanic crust collide.
6. Describe what happens when two plates carrying continental crust collide.
7. Describe what happens when a plate carrying oceanic crust collides with a plate carrying continental crust.
8. Explain what force caused the movement of the continents from one super-continent to their present positions.
9. A scientific _____ is a well-tested concept that explains a wide range of observations.
10. Breaks in Earth's crust where rocks have slipped past each other are called _____.
11. The lithosphere is broken into separate sections called _____.
12. A(n) _____ is a deep valley on land that forms along a divergent boundary.
13. The geological theory that states that pieces of Earth's crust are in constant, slow motion is called _____.

a. $\lim_{x \rightarrow 0} \frac{\sin 3x}{x} = \lim_{x \rightarrow 0} 3 \frac{\sin 3x}{3x} = (3)(1) = 3.$

b. $\lim_{\theta \rightarrow 0} \frac{\sin 3\theta}{2\theta} = \lim_{\theta \rightarrow 0} \frac{3}{2} \frac{\sin 3\theta}{3\theta} = \left(\frac{3}{2}\right)(1) = \frac{3}{2}.$

c. $\lim_{x \rightarrow 0^+} \frac{\sin x}{|x|} = \lim_{x \rightarrow 0^+} \frac{\sin x}{x} = 1,$

$$\lim_{x \rightarrow 0^-} \frac{\sin x}{|x|} = \lim_{x \rightarrow 0^-} \frac{\sin x}{-x} = \lim_{x \rightarrow 0^-} \left(-\frac{\sin x}{x} \right) = -1.$$

Since the right- and left-hand limits are different,

$$\lim_{x \rightarrow 0} \frac{\sin x}{|x|}$$

