



The Math Early Bird



If you change the grouping of the addends, the sum will remain the same.
This is called the **associative property**.

$$(4 + 2) + 1 = 4 + (2 + 1)$$

Solve each problem. Then use the code to answer the riddle below.

$$(3 + 5) + 8 = \square + (5 + 8)$$



$$(8 + 2) + 9 = 8 + (\square + 9)$$



$$9 + (3 + 8) = (\square + 3) + 8$$

$$5 + (2 + 4) = (5 + 2) + \square$$



$$6 + (4 + 3) = (6 + \square) + 3$$

$$7 + (6 + 6) = (\square + 6) + 6$$

$$(10 + 2) + 4 = 10 + (\square + 4)$$



$$8 + (8 + 4) = (\square + 8) + 4$$

$$(10 + 3) + 2 = 10 + (\square + 2)$$

$$6 + (4 + 3) = (\square + 4) + 3$$



$$7 + (2 + 8) = (\square + 2) + 8$$

$$9 + (9 + 8) = (\square + 9) + 8$$

$$(9 + 8) + 2 = \square + (8 + 2)$$

$$(\square + 8) + 5 = 7 + (8 + 5)$$

$$7 + (8 + 4) = (\square + 8) + 4$$



$$7 + (2 + 6) = (\square + 2) + 6$$

$$(9 + 3) + 2 = \square + (3 + 2)$$

$$(\square + 8) + 3 = (9 + 8) + 3$$

$$7 + (7 + 3) = (7 + 7) + \square$$

$$8 + (\square + 2) = (8 + 9) + 2$$



What game do birds play?

_____ - _____ - _____
2 3 3 7 4 6 9 9



Use three dice. Roll two of the dice. Write as an addition problem in parentheses. Roll the other die. Add to the sum in the parentheses. Now switch the parentheses. Add. Does it still add up to the same sum?