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## Equivalent Expressions - Distributive Property

For each row, decide whether the pair of expressions is equal or not equal, and explain your reasoning. Within a row, variables in both expressions have the same value.

| 1. | $2(3+4)$ | equal (=) not equal $(\neq)$ | $2(3)+4$ |
| :---: | :---: | :---: | :---: |
|  | Explain your reasoning: |  |  |
| 2. | $2(a+5)$ | equal ( $=$ ) not equal $(\neq)$ | $2 a+10$ |
|  | Explain your reasoning: |  |  |
| 3. | $2 l+w$ | equal ( $=$ ) not equal $(\neq)$ | $2(l+w)$ |
|  | Explain your reasoning: |  |  |
| 4. | $a \cdot b \cdot c$ | equal ( $=$ ) not equal $(\neq)$ | $c \bullet b \bullet a$ |
|  | Explain your reasoning. |  |  |

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| Explain your reasoning. |  |
| :--- | :--- | :--- | :--- |


| Explain your reasoning. |  |  |
| :--- | :--- | :--- |
| 8. |  |  |
|  | $\mathbf{2 ( 3 + \boldsymbol { x } )}$ | $\square$ equal $(=)$ |
|  | $\square$ not equal $(\neq)$ | $\mathbf{2 ( 3 x )}$ |

Explain your reasoning.

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9. Jamie and Sue drew pictures to represent the expression they were given. Decide which student's drawing best represents the expression they were given.

The students drew a representation for the expression: $\mathbf{5}(\mathbf{2}+\mathbf{3})$


Explain your thinking about which student's picture best represents the expression and why you think so.
10. The students were given 2 expressions and asked if they were equal. What do you think?

|  | $\square$ equal $(=)$ |  |
| :--- | :--- | :--- |
| $\mathbf{2 ( 7 )}$ | $\square$ not equal $(\neq)$ | $\mathbf{2 ( 3 ) + 2 ( 4 )}$ |
|  |  |  |

Draw a picture to show your thinking:

