

Math Mixed Review (Properties): Put the parenthesis at the right place of the following equation to show the associative property of addition and then find the sum of the addition:

1. $61 + 9 + 20 = 61 + 9 + 20 = \underline{\hspace{2cm}}$

2. $13 + 11 + 19 = 13 + 11 + 19 = \underline{\hspace{2cm}}$

3. $6 + 14 + 12 = 6 + 14 + 12 = \underline{\hspace{2cm}}$

4. $7 + 9 + 13 = 7 + 9 + 13 = \underline{\hspace{2cm}}$

5. $5 + 0 + 19 = 5 + 0 + 19 = \underline{\hspace{2cm}}$

Apply the property to simplify and solve the math expressions mentally:

$$52 + 30 = \underline{(50 + 30) + 2} = 82$$

$$19 \times 24 = \underline{24 \times (20 - 1)} = \underline{480 - 24} = 480 - 20 - 4 = 460 - 2 = 458$$

6. $16 + 53 + 14 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7. $(19 \times 25) \times 4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8. $79 \times 9 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9. $17 + 21 + 33 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. $31 \times 11 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Break the number and then apply distributive property to solve the multiplication problems. An example is given for you.

$$12 \times 20 = (10 + 2) \times 20 = 10 \times 20 + 2 \times 20 = 200 + 40 = 240$$

11. $23 \times 11 =$

12. $72 \times 9 =$

13. $57 \times 40 =$

14. $96 \times 25 =$