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Chapter 3 Lesson A :

Use the Commutative and Associative Rule (3.A.1)

Commutative Rule: changing the order of addends does not change the sum

Q1. Add the following by using the commutative rule of addition.

change the order
of the addends

a) 82 , 20

Way 1: $\begin{array}{r} 20 \\ + 82 \\ \hline \end{array} = 102$ the sum

Way 2: $\begin{array}{r} 82 \\ + 20 \\ \hline \end{array} = 102$ the sum

addends

b) 44 , 13

Way 1: $\begin{array}{r} 44 \\ + 13 \\ \hline \end{array} = 57$

Way 2: $\begin{array}{r} 13 \\ + 44 \\ \hline \end{array} = 57$

same sum

c) 132 , 50

Way 1: $\begin{array}{r} 132 \\ + 50 \\ \hline \end{array} = 182$

Way 2: $\begin{array}{r} 50 \\ + 132 \\ \hline \end{array} = 182$

Associative Rule: the way addends are grouped does not change the sum.

Q2. Add the numbers in 3 different ways using the associative rule of addition.

change the grouping
of the addends

a) 5, 15, 25

Way 1: $\frac{15 + 5}{20} + \frac{25}{25} = 45$

Way 2: $15 + \boxed{5 + 25} = 45$
 $15 + 30 = 45$

Way 3: $\boxed{15} + 5 + \boxed{25} = 45$ [addends]
 $40 + 5 = 45$ [sum]

b) 24, 4, 6

Way 1: $\frac{24 + 6}{30} + \frac{4}{4} = 34$ [addends]
[sum]

Way 2: $24 + \boxed{6 + 4} = 34$ [addends]
 $24 + 10 = 34$ [sum]

Way 3: $\boxed{24} + 6 + \boxed{4} = 34$ [addends]
 $28 + 6 = 34$ [sum]