Name _____

Reteaching
1.5 Mental Math – Use the Properties

Commutative Property –

Changing the **order** of the addends or factors will not change the solution.

5 + 6 + 5	=	5 + 5 +6		6 * 3 * 5	=	6 * 5 * 3
11 + 5	=	10 + 6		18 * 5	=	30 * 3
16	=	16		90	=	9

Associative Property –

Changing the **grouping** of the addends or factors will not change the solution.

(5 + 6) + 5	=	5 + (6 + 5)		(6 * 3) * 5	=	6 * (3 * 5)
11 + 5	=	5 + 11		18 * 5	=	6 *15
16	=	16		90	=	90

Distributive Property –

When you multiply a number by a sum, you can either;

find the sum first or multiply **each** addend by the number.

(5 + 3)b	=	8b		(b + 7)5	=	5b + 35

Identify the property demonstrated by each of the following.

1) 6 * (4 * ***n***) = (6 * 4) * ***n***

_____

2) 4 * ***n*** = ***n*** * 4

_____

3) 35 * (***n*** * 5) = (35 * ***n***) * 5

_____

4) 3 * (10 + ***n***) = (3 * 10) + (3 * ***n***)

_____

5) (3 * ***n***) * 2 = 3 * (***n*** * 2)

_____

6) (5 + ***n***) * 8 = (8 * 5) + (***n*** * 8)

_____

Identify the property demonstrated by each of the following then solve for ***n.***

1) 8 * ***n*** = 9 * 8

_____

2) 11 * (7 * 5) = (11 * 7) * ***n***

_____

3) (7 * 6) * 4 = 7 * (***n*** * 4)

_____

4) 5 * (10 + ***n***) = 5 * 55

_____

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Name _____

Reteaching
1.5b Mental Math – Methods

Compatible Numbers –

Numbers that add or multiply together easily are called compatible. Use the commutative property to organize the sets for easy computation

13 + 28 + 17 + 12 = 13 + 17 + 28 + 12

31 + 17 + 12 = 30 + 40

48 + 12 = 70

Compensation –

You can add and subtract values to the addends as long as you keep the equation balanced!

27 + 35 = 30 is easier to add so I'll give the 27 three from the 35

27 + 35 = 62

---

62 - 48 = I'd rather subtract 50 so I'll add 2 to both terms

64 – 50 = 14

---

48 * 9 = I'd rather * 10 so I'll multiply by 10 then subtract 48

48 * 10 = 480 – 48 = 482 - 50 = 432

Distributive Property –

You can use the distributive property to simplify multiplication problems.

32 x 7 = (30 * 7) + (3 * 2)

210 + 6 = 216

52 * 40 = (50 * 40) + (2 * 40)

2000 + 80 = 2080

Choose a mental math strategy and rewrite each of the following to model your mental math.

1) 47 + 84 + 13 + 16

Compatible

47 + 13 + 84 + 16

= 60 + 100 = 160

2) 68 * 7

3) 34 - 17

4) 28 + 37 + 18

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