Year 5 Worksheet 4 - Multiplication & Distributive law

Question 1: Multiply the following using distributive law as shown.

23 x 9 = 20 x 9 + 3 x 9 = 180 + 27 = 207	25 x 8
34 x 7	45 x 3
56 x 9	73 x 4
66 x 6	95 x 5
92 x 7	78 x 9

Question 2: Solve the following as shown.

1	Example Question: Use the distributive property to simplify the expression: 6 x (7 + 2). Solution: 6 x (7 + 2) = (6 x 7) + (6 x 2) = 42 + 12 = 54.
2	Use the distributive property to find the product of 5 x (10 + 2).
3	How would you simplify the expression 7 x (4 + 5) using the distributive property?
4	Which property of multiplication allows you to rewrite 9 x 13 as (9 x 10) + (9 x 3)?

5	Using the distributive property, calculate 6 x (12 + 8). .
6	Apply the distributive property to solve the following: 4 x (6 + 3).
7	Simplify the expression 3 x (9 + 2) using the distributive property.
8	How would you find the product of 11 x 17 using the distributive property?

9	If you have to find the total cost of 18 notebooks at $5 each using the distributive property, how would you do it?
10	Write an expression for the area of a rectangle with length 15 units and width 7 units using the distributive property.

Question 3: Multiply the following in column.

25 x 18	42 x 20
34 x 27	45 x 31
56 x 42	73 x 28

66 x 37	95 x 59
92 x 77	78 x 46
98 x 79	87 x 58

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Answer Key

Question 1: Multiply the following using distributive law as shown.

23 x 9 = 207	25 x 8 = 200
34 x 7 = 238	45 x 3 = 135
56 x 9 = 504	73 x 4 = 292
66 x 6 = 396	95 x 5 = 475
92 x 7 = 644	78 x 9 = 702

Question 2: Solve the following as shown.

1	Example Question: Use the distributive property to simplify the expression: 6 x (7 + 2). Solution: 6 x (7 + 2) = (6 x 7) + (6 x 2) = 42 + 12 = 54.
2	Use the distributive property to find the product of 5 x (10 + 2). Answer: 5 x (10 + 2) = (5 x 10) + (5 x 2) = 50 + 10 = 60
3	How would you simplify the expression 7 x (4 + 5) using the distributive property? Answer: 7 x (4 + 5) = (7 x 4) + (7 x 5) = 28 + 35 = 63.
4	Which property of multiplication allows you to rewrite 9 x 13 as (9 x 10) + (9 x 3)? Answer: The distributive property allows you to rewrite 9 x 13 as (9 x 10) + (9 x 3).

5	Using the distributive property, calculate 6 x (12 + 8). Answer: 6 x (12 + 8) = (6 x 12) + (6 x 8) = 72 + 48 = 120.
6	Apply the distributive property to solve the following: 4 x (6 + 3). Answer: 4 x (6 + 3) = (4 x 6) + (4 x 3) = 24 + 12 = 36
7	Simplify the expression 3 x (9 + 2) using the distributive property. Answer: 3 x (9 + 2) = (3 x 9) + (3 x 2) = 27 + 6 = 33.
8	How would you find the product of 11 x 17 using the distributive property? Answer: 11 x 17 can be rewritten as (10 x 17) + (1 x 17) using the distributive property, which equals 170 + 17 = 187.
9	If you have to find the total cost of 18 notebooks at $5 each using the distributive property, how would you do it? Answer: The total cost can be calculated as 18 x $5, which can be simplified as (5 x 8) using the distributive property, resulting in $90.
10	Write an expression for the area of a rectangle with length 15 units and width 7 units using the distributive property. Answer: The area of the rectangle can be expressed as 15 x 7, which can be further simplified as (10 x 7) + (5 x 7) using the distributive property.

Question 3: Multiply the following in column.

25 x 18 = 450	42 x 20 = 840
34 x 27 = 918	45 x 31 = 1395
56 x 42 = 2352	73 x 28 = 2044
66 x 37 = 2442	95 x 59 = 5605

92 x 77 = 7084	78 x 46 = 3588
98 x 79 = 7742	87 x 58 = 5046