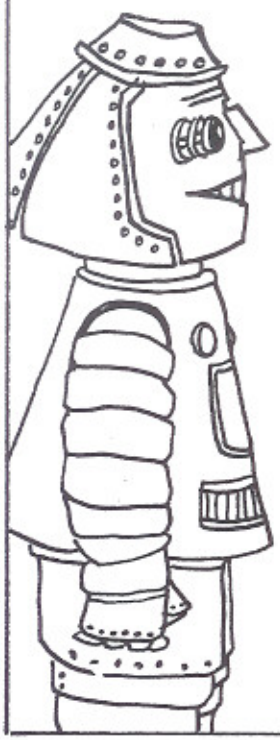
Distributive Property



This property can help you multiply in your head.

When multiplying two numbers break apart one of them and find the sum of the products of each part.

$6 \times 125 = 6 \times (100 + 25)$

1. Break apart one of the numbers.

$6 \times 125 = (6 \times 100) + (6 \times 25)$

2. Find the product of each part.

$6 \times 125 = (600) + (150)$

3. Add

$6 \times 125 = 750$

1. $5 \times 31 = 5 \times (30 + 1)$
   $= (5 \times \_\_) + (5 \times \_\_)$
   $= \_\_\_\_ + \_\_\_\_$
   $= \_\_\_\_$

2. $4 \times 82 = 4 \times (\_\_ + \_\_)$
   $= (4 \times \_\_) + (4 \times \_\_)$
   $= \_\_\_\_ + \_\_\_\_$
   $= \_\_\_\_$

3. $8 \times 63 = \_\_ \times (\_\_ + \_\_)$
   $= (\_\_ \times \_\_) + (\_\_ \times \_\_)$
   $= \_\_\_\_ + \_\_\_\_$
   $= \_\_\_\_$

4. $7 \times \$1.30 = 7 \times (\_\_ + \_\_)$
   $= (7 \times \_\_) + (7 \times \_\_)$
   $= \_\_\_\_ + \_\_\_\_$
   $= \_\_\_\_$

5. $3 \times (5 + 4) = (3 \times 5) + (3 \times \_\_) = \_\_ + 12 = \_\_$
6. $5 \times (4 + 6) = (\_\_ \times 4) + (5 \times \_\_) = 20 + \_\_ = \_\_$
7. $8 \times (5 + 30) = (8 \times \_\_) + (8 \times 30) = 40 + \_\_ = \_\_$
8. $4 \times (90 + \_\_) = (\_\_ \times \_\_) + (\_\_ \times 2) = \_\_ + \_\_ = \_\_$
9. $6 \times (50 + \_\_) = (\_\_ \times \_\_) + (\_\_ \times \_\_) = \_\_ + 18 = \_\_$
10. $a \times (b + c) = (a \times \_\_) + (\_\_ \times c)$

The distributive property

When multiplying two numbers, you can break apart one of them and find the sum of the products in parts. We say that multiplication is distributive over addition.

$4 \times 82 = 4 \times (80 + 2)$

$= (4 \times 80) + (4 \times 2)$

$= 320 + 8$

$= 328$

$a \cdot (b + c) = (a \cdot b) + (a \cdot c)$

Fill in the missing numbers.

1. $6 \times (5 + 4) = (6 \times 5) + (6 \times \_\_\_)$

   $= \_\_\_ + 24$

   $= \_\_\_$

2. $5 \times (8 + 9) = (5 \times \_\_\_) + (5 \times 9)$

   $= 40 + \_\_\_$

   $= \_\_\_$

3. $7 \times (10 + 6) = (\_\_\_ \times 10) + (7 \times 6)$

   $= 70 + \_\_\_$

   $= \_\_\_$

4. $s \cdot (r + t) = (s \cdot \_\_\_) + (\_\_\_ \cdot t)$

Use the distributive property to multiply.

5. $7 \times 35 = 7 \times + (30 + 5)$

   $= (7 \times \_\_\_) + (7 \times \_\_\_)$

   $= \_\_\_ + \_\_\_$

   $= \_\_\_$

6. $5 \times 140 = 5 \times (\_\_\_ + \_\_\_)$

   $= (5 \times \_\_\_) + (5 \times \_\_\_)$

   $= \_\_\_ + \_\_\_$

   $= \_\_\_$

7. $9 \cdot 25 = 9 \cdot (\_\_\_ + \_\_\_)$

   $= (9 \cdot \_\_\_) + (9 \cdot \_\_\_)$

   $= \_\_\_ + \_\_\_$

   $= \_\_\_\_\_$

8. $6 \cdot 17 = \_\_\_ \cdot (10 + 7)$

   $= (\_\_\_ \cdot \_\_\_) + (\_\_\_ \cdot 7)$

   $= \_\_\_ + \_\_\_$

   $= \_\_\_$

9. $5 \times 89 = \_\_\_ \times (\_\_\_ + \_\_\_)$

   $= (\_\_\_ \times \_\_\_) + (\_\_\_ \times \_\_\_)$

   $= \_\_\_ + \_\_\_$

   $= \_\_\_$

10. $5 \times 46 = \_\_\_ \times (\_\_\_ + \_\_\_)$

    $= (\_\_\_ \times \_\_\_) + (\_\_\_ \times \_\_\_)$

    $= \_\_\_ + \_\_\_$

    $= \_\_\_$