MULTIPLYING FACTORS EQUAL DISTANCE FROM NUMBER

Problem: 38 X 42 = ?

Method:
1. Square the difference each factor is from the midway number.
2. Square the midway number.
3. Subtract the product in #1 from the square of the midway number in #2.

Solve:
1. Square 2, the distance 38 and 42 are from 40, the midway number.
2. Square the midway number, 40 to get 1600.
3. Subtract square in #1 and #2.
   1600 - 4 = 1596 Answer

TRY THESE:

1. 53 x 47 =
2. 62 x 58 =
3. 21 x 19 =
4. 84 x 76 =
5. 69 x 71 =
6. 79 x 81 =
7. 89 x 91 =
8. 5.9 x 6.1 =
9. 52 x 58 =
10. 34 x 36 =

LIKE FACTORS WITH ONES IN THE ONES' PLACE

Problem: | 71 X 71 = ? |

Method:
1. Write down the one in the answer in the ones' place.
2. Add the two tens' digits. Write down the ones' digit and remember the tens' digit.
3. Multiply the tens' digits and add the digit remembered in #2.

Solve:
1. Write down the one.
2. 7 + 7 = 14 Write down the '4' and remember the 1
3. 7 x 7 = 49 plus 1 = 50

   5041 Answer

TRY THESE:

1. 81 x 81 =
2. 91 x 91 =
3. 31 x 31 =
4. 61 x 61 =
5. 51 x 51 =
6. 21 x 21 =
7. 41 x $4.10 =
8. 71 x $7.10 =

USING THE DISTRIBUTIVE PROPERTY IN MULTIPLICATION

Problem: $4 \times 15 + 6 \times 15 = ?$

Method:

1. Notice if any factors have been repeated (or distributed)?
2. Add factors not repeated or distributed.
3. Multiply repeated or distributed factor by sum in #2.

Solve:

1. 15 is distributed using the distributive property.
2. Numbers not distributed are 4 and 6.
   $4 + 6 = 10$
3. Multiply sum in #2 by distribute number, 15.
   $10 \times 15 = \underline{150}$ Answer

Or: $12 \times 85 + 12 \times 15 =$

1. 12 is distributed.
2. $85 + 15 = 100$
3. $12 \times 100 = \underline{1200}$ Answer

TRY THESE:

1. $(12 \times 75) + (12 \times 25) =$
2. $7 \times 15 + 3 \times 15 =$
3. $8 \times 18 + 2 \times 18 =$
4. $4 \times 16 + 6 \times 16 =$
5. $(23 \times 101) + (102 \times 23)$ Estimate