

Name: _____

Date: _____

Use a halving and doubling strategy to calculate each product.

1. $16 \times 3 = 8 \times 6 = 48$

$\times 2$

$\div 2$

2. $23 \times 4 =$

3. $5 \times 18 =$

4. $50 \times 28 =$

Use place value and $\times/\div$ facts to solve each problem. Show each step.

5. $0.6 \times 4 = \underline{\quad} \div 10 \times 4$
 $\underline{\quad} \times 4 \div 10$
 $\underline{\quad} \div 10 = \underline{\quad}$

6. $0.3 \times 8 = \underline{\quad} \div 10 \times 8$
 $\underline{\quad} \times 8 \div 10$
 $\underline{\quad} \div 10 = \underline{\quad}$

7. $0.9 \times 15 = \underline{\quad} \div 10 \times 15$
 $\underline{\quad} \times 15 \div 10$
 $\underline{\quad} \div 10 = \underline{\quad}$

8. $0.4 \times 20 = \underline{\quad} \div 10 \times 20$
 $\underline{\quad} \times 20 \div 10$
 $\underline{\quad} \div 10 = \underline{\quad}$

Choose a mental math strategy for each problem below.

9. $30 \times 50 = \underline{\quad}$

10. $8 \times 51 = \underline{\quad}$

11. $14 \times 5 = \underline{\quad}$

12. $16 \times 10 = \underline{\quad}$

13. $0.6 \times 12 = \underline{\quad}$

14. $3 \times 82 = \underline{\quad}$

15. $3 \times 14 = \underline{\quad}$

16. $90 \times 80 = \underline{\quad}$

STRATEGIES FOR MENTAL MATH

MULTIPLY BY 10, 100, 1000
When a number is multiplied by another number that is a multiple of 10, use the base fact then add zeroes at the end.

NEAR MULTIPLE OF 10
When you round UP, subtract the # of groups. When you round DOWN, add the # of groups.

DOUBLING
When one number is the same and the other is $\times 2$, double ($\times 2$) the answer.

HALVING
When one number is the same and the other is half ($\div 2$), divide the answer by 2.

$7 \times 5 = 35$
 $7 \times 50 = 350$
 $70 \times 50 = 3500$

27×4
 $30 \times 4 = 120$
 $- (3 \times 4) = 108$
 32×4
 $30 \times 4 = 120$
 $+ (2 \times 4) = 128$

$3 \times 16 = 48$
 $\times 2 \quad \times 2$
 $3 \times 32 = 96$

$15 \times 8 = 120$
 $\div 2 \quad \div 2$
 $15 \times 4 = 60$

Doubling + Halving to find the same answer.

$$\begin{array}{r} 16 \times 5 \\ 32 \times 10 \\ = 320 \end{array}$$

Place Value and Multiplication Facts with Decimals

$$\begin{array}{r} 0.6 \times 9 = 6 \times 9 \div 10 \\ 54 \div 10 = 5.4 \end{array}$$