

Name: _____

Date: _____

Use a halving and doubling strategy to calculate each product.

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

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

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

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

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

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

NEAR MULTIPLE OF 10
 When you round UP, subtract the # of groups. When you round DOWN, add the # of groups.
 27×4
 $30 \times 4 = 120$
 $- (3 \times 4) = 108$
 32×4
 $30 \times 4 = 120$
 $+ (2 \times 4) = 128$

DOUBLING
 When one number is the same and the other is $\times 2$, double ($\times 2$) the answer.
 $3 \times 16 = 48$
 $\times 2 \quad \times 2$
 $3 \times 32 = 96$

HALVING
 When one number is the same and the other is $\div 2$, divide the answer by 2.
 $15 \times 8 = 120$
 $\div 2 \quad \div 2$
 $15 \times 4 = 60$

Doubling + Halving to find the same answer.

16×5
 32×10
 $= 320$

Place Value and Multiplication Facts with Decimals

$0.6 \times 9 = 6 \times 9 \div 10$
 $54 \div 10 = 5.4$