



## Associative Property: Equivalence

Grade 4

Name: \_\_\_\_\_

Solve for the missing factor using properties.

Example:  $(9 \times 14) \times \underline{\hspace{2cm}} = (9 \times 7) \times 28 \rightarrow 9 \text{ cancels; } 14 \times \underline{\hspace{2cm}} = 7 \times 28 = 196 \rightarrow \underline{\hspace{2cm}} = 14$

(1)  $(9 \times 12) \times \underline{\hspace{2cm}} = (6 \times 9) \times 8$

(2)  $(15 \times \underline{\hspace{2cm}}) \times 9 = (3 \times 10) \times 27$

(3)  $(\underline{\hspace{2cm}} \times 9) \times 10 = (18 \times 5) \times 9$

(4)  $(7 \times 9) \times \underline{\hspace{2cm}} = (21 \times 3) \times 9$

(5)  $(20 \times 9) \times 12 = (\underline{\hspace{2cm}} \times 10) \times 18$

(6)  $(11 \times 9) \times \underline{\hspace{2cm}} = (33 \times 3) \times 9$

(7)  $(\underline{\hspace{2cm}} \times 15) \times 9 = (30 \times 5) \times 9$

(8)  $(13 \times 9) \times \underline{\hspace{2cm}} = (39 \times 3) \times 9$

(9)  $(25 \times \underline{\hspace{2cm}}) \times 9 = (5 \times 15) \times 30$

(10)  $(9 \times 16) \times \underline{\hspace{2cm}} = (4 \times 9) \times 12$

(11)  $(\underline{\hspace{2cm}} \times 9) \times 20 = (10 \times 18) \times 10$

(12)  $(19 \times 5) \times \underline{\hspace{2cm}} = (95 \times 1) \times 9$

