



Properties of Multiplication

Name: _____

Date: _____

Grade: Grade 3

Part A: Multiple Choice

Circle the best answer for each question.

1. Grade 3: which properties justify $2 \times (5 \times 7) = 7 \times (5 \times 2)$?

- A) Commutative and associative
- B) Distributive only
- C) Identity only
- D) Zero and identity

2. Grade 3: $6 \times 12 = 6 \times (10 + 2)$ uses the distributive property to equal which expression?

- A) $6 \times 10 + 6 \times 2$
- B) $6 + 10 + 2$
- C) $6 \times 10 - 2$
- D) $12 + 6 + 6$

3. Grade 3: why does $4 \times 25 \times 3 = 3 \times 100$ also equal 300?

- A) Commutative regroups factors, associative pairs 4 and 25 to make 100
- B) Identity property
- C) Zero property
- D) Subtraction property

4. Grade 3: which equation uses zero and identity properties together?

- A) $(7 \times 0) + (7 \times 1) = 0 + 7 = 7$
- B) $(7 + 0) \times (7 + 1) = 7 \times 8$
- C) $7 \times 7 = 49$
- D) $7 \times (0 + 1) = 7 \times 1$ only

Part B: Fill in the Blank

Write the correct answer on each line.

1. Grade 3: $8 \times 5 \times 2 = 8 \times (5 \times 2) = 8 \times 10 =$ _____ using associative.

2. Grade 3: $6 \times 12 = 6 \times (10 + 2) = 60 +$ _____ $= 72$ by distributive.

3. Grade 3: $4 \times 25 \times 3 = 3 \times (4 \times 25) = 3 \times$ _____ $= 300$.

4. Grade 3: $(5 \times 0) + (5 \times 1) = 0 +$ _____ $= 5$ using zero and identity.

5. Grade 3: $9 \times 11 = 9 \times (10 + 1) = 90 + 9 =$ _____ using distributive.

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2. Grade 3: $6 \times 12 = 6 \times (10 + 2)$ uses the distributive property to equal which expression?

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3. Grade 3: why does $4 \times 25 \times 3 = 3 \times 100$ also equal 300?

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4. Grade 3: which equation uses zero and identity properties together?

- A) $(7 \times 0) + (7 \times 1) = 0 + 7 = 7$
- B) $(7 + 0) \times (7 + 1) = 7 \times 8$
- C) $7 \times 7 = 49$
- D) $7 \times (0 + 1) = 7 \times 1$ only

Part B: Fill in the Blank

Write the correct answer on each line.

1. Grade 3: $8 \times 5 \times 2 = 8 \times (5 \times 2) = 8 \times 10 = \underline{80}$ using associative.
2. Grade 3: $6 \times 12 = 6 \times (10 + 2) = 60 + \underline{12} = 72$ by distributive.
3. Grade 3: $4 \times 25 \times 3 = 3 \times (4 \times 25) = 3 \times \underline{100} = 300$.
4. Grade 3: $(5 \times 0) + (5 \times 1) = 0 + \underline{5} = 5$ using zero and identity.
5. Grade 3: $9 \times 11 = 9 \times (10 + 1) = 90 + 9 = \underline{99}$ using distributive.