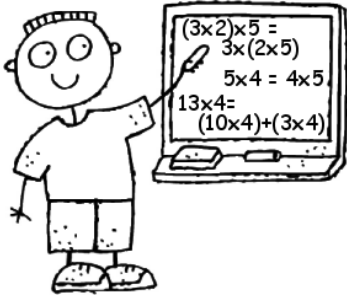


Properties of Multiplication

Worksheet 1

The **commutative property of multiplication** is the rule which states that the order in which the numbers of an expression are combined does not affect the outcome.

Example: $3 \times 5 = 5 \times 3$



The **associative property of multiplication** is the rule which states that the grouping of numbers in an expression does not affect the outcome.

Example: $(3 \times 5) \times 7 = 3 \times (5 \times 7)$

The **distributive property of multiplication** is the rule which states that numbers can be broken into smaller numbers for calculating.

Example: $14 \times 5 = (10 \times 5) + (4 \times 5)$

Which equation shows the commutative property of multiplication?

- | | |
|--|---|
| 1. <input type="radio"/> $(12 \times 4) \times 3 = 12 \times (4 \times 3)$ | 2. <input type="radio"/> $15 \times 2 = 2 \times 15$ |
| <input type="radio"/> $12 \times 7 = 7 \times 12$ | <input type="radio"/> $15 \times 2 = 30$ |
| <input type="radio"/> $12 \times 7 = 84$ | <input type="radio"/> $15 \times 2 = (10 \times 2) + (5 \times 2)$ |
| <input type="radio"/> $12 \times 7 = (10 \times 7) + (2 \times 7)$ | <input type="radio"/> $(5 \times 3) \times 2 = 5 \times (3 \times 2)$ |

Which equation shows the associative property of multiplication?

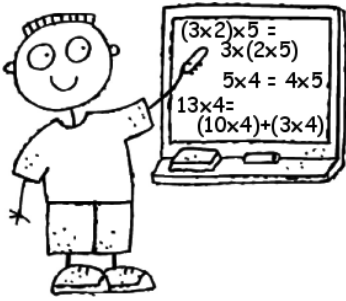
- | | |
|---|---|
| 3. <input type="radio"/> $18 \times 5 = 90$ | 4. <input type="radio"/> $72 = 12 \times 6$ |
| <input type="radio"/> $18 \times 5 = (10 \times 5) + (8 \times 5)$ | <input type="radio"/> $(3 \times 4) \times 6 = 3 \times (4 \times 6)$ |
| <input type="radio"/> $(9 \times 2) \times 5 = 9 \times (2 \times 5)$ | <input type="radio"/> $12 \times 6 = 6 \times 12$ |
| <input type="radio"/> $18 \times 5 = 5 \times 18$ | <input type="radio"/> $12 \times 6 = (10 \times 6) + (2 \times 6)$ |

Which equation shows the distributive property of multiplication?

- | | |
|---|--|
| 5. <input type="radio"/> $22 \times 4 = 4 \times 22$ | 6. <input type="radio"/> $(7 \times 5) \times 5 = 7 \times (5 \times 5)$ |
| <input type="radio"/> $22 \times 4 = 88$ | <input type="radio"/> $35 \times 5 = 5 \times 35$ |
| <input type="radio"/> $22 \times 4 = (20 \times 4) + (2 \times 4)$ | <input type="radio"/> $35 \times 5 = 175$ |
| <input type="radio"/> $(11 \times 2) \times 4 = 11 \times (2 \times 4)$ | <input type="radio"/> $35 \times 5 = (30 \times 5) + (5 \times 5)$ |

Properties of Multiplication

Worksheet 2



commutative property of multiplication : $3 \times 5 = 5 \times 3$

associative property of multiplication: $(3 \times 5) \times 7 = 3 \times (5 \times 7)$

distributive property of multiplication: $14 \times 5 = (10 \times 5) + (4 \times 5)$

Which equation shows the commutative property of multiplication?

1. $(8 \times 2) \times 9 = 8 \times (2 \times 9)$
- $16 \times 9 = 9 \times 16$
- $16 \times 9 = 144$
- $16 \times 9 = (10 \times 9) + (6 \times 9)$
2. $26 \times 2 = 2 \times 26$
- $26 \times 2 = 52$
- $26 \times 2 = (20 \times 2) + (6 \times 2)$
- $(13 \times 2) \times 2 = 13 \times (2 \times 2)$

Which equation shows the associative property of multiplication?

3. $34 \times 9 = 306$
- $34 \times 9 = (30 \times 9) + (4 \times 9)$
- $(17 \times 2) \times 9 = 17 \times (2 \times 9)$
- $34 \times 9 = 9 \times 34$
4. $150 = 25 \times 6$
- $(5 \times 5) \times 6 = 5 \times (5 \times 6)$
- $25 \times 6 = 6 \times 25$
- $25 \times 6 = (20 \times 6) + (5 \times 6)$

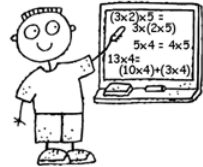
Which equation shows the distributive property of multiplication?

5. $32 \times 7 = 7 \times 32$
- $32 \times 7 = 224$
- $32 \times 7 = (30 \times 7) + (2 \times 7)$
- $(8 \times 4) \times 7 = 8 \times (4 \times 7)$
6. $(12 \times 2) \times 4 = 12 \times (2 \times 4)$
- $24 \times 4 = 4 \times 24$
- $24 \times 4 = 96$
- $24 \times 4 = (20 \times 4) + (4 \times 4)$
7. $75 = 15 \times 5$
- $(3 \times 5) \times 5 = 3 \times (5 \times 5)$
- $15 \times 5 = 5 \times 15$
- $15 \times 5 = (10 \times 5) + (5 \times 5)$
8. $18 \times 9 = 162$
- $18 \times 9 = (10 \times 9) + (8 \times 9)$
- $(3 \times 6) \times 9 = 3 \times (6 \times 9)$
- $18 \times 9 = 9 \times 18$

Properties of Multiplication Worksheet 1

Properties of Multiplication

Worksheet 1



The **commutative property of multiplication** is the rule which states that the order in which the numbers of an expression are combined does not affect the outcome.

Example: $3 \times 5 = 5 \times 3$

The **associative property of multiplication** is the rule which states that the grouping of numbers in an expression does not affect the outcome.

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| <input type="radio"/> $18 \times 5 = 5 \times 18$ | <input type="radio"/> $12 \times 6 = (10 \times 6) + (2 \times 6)$ |

Which equation shows the distributive property of multiplication?

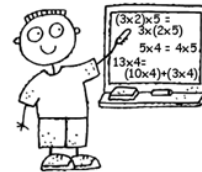
- | | |
|---|---|
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Properties of Multiplication Worksheet 2

Properties of Multiplication

Worksheet 2



commutative property of multiplication : $3 \times 5 = 5 \times 3$

associative property of multiplication: $(3 \times 5) \times 7 = 3 \times (5 \times 7)$

distributive property of multiplication: $14 \times 5 = (10 \times 5) + (4 \times 5)$

Which equation shows the commutative property of multiplication?

- | | |
|--|---|
| 1. <input type="radio"/> $(8 \times 2) \times 9 = 8 \times (2 \times 9)$ | 2. <input checked="" type="radio"/> $26 \times 2 = 2 \times 26$ |
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Which equation shows the associative property of multiplication?

- | | |
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