

Practice Masters Level A

2.5 Properties and Mental Computation

Complete each step, and name the property used.

1. $82 + (76 + 18)$

$= 82 + (\text{_____} + 76)$

Commutative Property of Addition

$= (82 + \text{_____}) + 76$

_____ Property of Addition

$= \text{_____} + 76$

$= \text{_____}$

2. $(40 \cdot 7) \cdot 5$

$= (7 \cdot \text{_____}) \cdot 5$

_____ Property of Multiplication

$= 7 \cdot (\text{_____} \cdot 5)$

_____ Property of Multiplication

$= 7 \cdot \text{_____}$

$= \text{_____}$

3. $4(80 + 7)$

$= 4 \cdot \text{_____} + \text{_____} \cdot 7$

_____ Property

$= \text{_____} + \text{_____}$

$= \text{_____}$

Use the Associative, Commutative, and Distributive Properties to find each sum or product. Show your work and name the properties used.

4. $20 \cdot (17 \cdot 5)$ _____

5. $(52 + 37) + 48$ _____

Use the Distributive Property and mental computation to calculate each product.

6. $5 \cdot 32 = 5(30 + 2)$

7. $9 \cdot 13 = 9(10 + 3)$

$= 5 \cdot 30 + 5 \cdot 2$

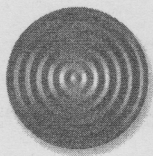
$9 \cdot \text{_____} + 9 \cdot \text{_____}$

$= 150 + 10$

$= \text{_____} + \text{_____}$

$= \text{_____}$

$= \text{_____}$



Practice Masters Level B

2.5 Properties and Mental Computation

Complete each step, and name the property used.

1. $5 \cdot (91 \cdot 2)$

$= 5 \cdot (\underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}})$

$= (5 \cdot \underline{\hspace{1cm}}) \cdot \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$

2. $(161 + 81) + 39$

$= (81 + \underline{\hspace{1cm}}) + \underline{\hspace{1cm}}$

$= 81 + (\underline{\hspace{1cm}} + \underline{\hspace{1cm}})$

$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$

Use the Distributive Property and mental computation to calculate each product.

3. $5 \cdot 595 = 5(600 - 5)$

$= \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}} - \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$

4. $4(28.5) = 4(30 - 1.5)$

$= \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}} - \underline{\hspace{1cm}} \cdot \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}} - \underline{\hspace{1cm}}$

$= \underline{\hspace{1cm}}$

Use the Distributive Property to rewrite each expression.

5. $8x + 8y$ _____

6. $8p + 28q$ _____

7. $6a - 9b$ _____

8. $ab + ac$ _____

9. $5rs + 25rt$ _____

10. $3fg - hg$ _____

Name the property illustrated. Be specific.

11. $14 + 2.2 = 2.2 + 14$ _____

12. $3(-2 + 4) = 3(-2) + 3(4)$ _____

13. $5(8x) = (5 \cdot 8)x$ _____

14. $(6 + 19) + 11 = 6 + (19 + 11)$ _____

15. $xy = yx$ _____

16. $(x - 3)7 = x \cdot 7 - 3 \cdot 7$ _____