

Name : _____

Topic: Math – Properties of Multiplication

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Directions: Write **IPM** if it's Identity Property of Multiplication, **ZPM** if it's Zero Property of Multiplication, **CPM** if it's Commutative Property of Multiplication, **APM** if it's Associative Property of Multiplication and **DPMA** if it's Distributive Property of Multiplication over Addition.

_____ 1. $(15 \times 9) \times 25 = 15 \times (9 \times 25)$

_____ 6. $1 \times 178 = 178$

_____ 2. $80 \times 0 = 0$

_____ 7. $(8 \times 9) \times 23 = 8 \times (9 \times 23)$

_____ 3. $75 \times (4 + 3) = (75 \times 4) + (75 \times 3)$

_____ 8. $256 \times 1 = 1 \times 256$

_____ 4. $354 \times 15 = 15 \times 354$

_____ 9. $(725 \times 25) \times 36 = 725 \times (25 \times 36)$

_____ 5. $(65 + 10) \times 8 = (65 \times 8) + (10 \times 8)$

_____ 10. $10\,000 \times 0 = 0$

Directions: Use the properties of multiplication to help you solve the word problems. Label your final answer.

1. Paula baked 3 dozen cookies for the bake sale. She decided to watch TV while the cookies are baking. When she checked on the cookies, all of them burned and cannot be eaten anymore. How many cookies can she sell at the bake fair?

2. Rebecca and Josh went to the junk yard to look for materials to recycle. First they found 9 pieces of carton boxes. Then they found 3 boxes of soda cans containing 20 pieces of cans in each box. How many materials have they gathered in the junk yard?

3. Jack and Ellie had 5 days of practice for a school program. Jack practiced for 3 hours each day, and Ellie practiced one hour longer each day than Jack. How many hours did Jack and Ellie practice for the entire five days?