

*A.N.1: Identify and apply the properties of real numbers.*

1. 080802ia, P.I. A.N.1

The statement  $2 + 0 = 2$  is an example of the use of which property of real numbers?

- [A] additive inverse      [B] distributive  
[C] associative      [D] additive identity

2. fall0705ia, P.I. A.N.1

Which property is illustrated by the equation  $ax + ay = a(x + y)$ ?

- [A] associative      [B] commutative  
[C] identity      [D] distributive

3. 010924a, P.I. A.N.1

Which property of real numbers is illustrated by the equation

$$52 + (27 + 36) = (52 + 27) + 36?$$

- [A] associative property  
[B] commutative property  
[C] identity property of addition  
[D] distributive property

4. 080806a, P.I. A.N.1

Which property is illustrated by the equation  $4x(2x - 1) = 8x^2 - 4x$ ?

- [A] identity      [B] associative  
[C] commutative      [D] distributive

5. 060827a, P.I. A.N.1

Which property is illustrated by the equation  $6 + (4 + x) = 6 + (x + 4)$ ?

- [A] associative property of addition  
[B] commutative property of addition  
[C] distributive property  
[D] associative property of multiplication

6. 010812a, P.I. A.N.1

Which property is represented by the statement  $\frac{1}{2}(6a + 4b) = 3a + 2b$ ?

- [A] distributive      [B] commutative  
[C] identity      [D] associative

7. 060714a, P.I. A.N.1

Which property is illustrated by the equation

$$\frac{3}{2}x + 0 = \frac{3}{2}x?$$

- [A] additive inverse property  
[B] commutative property of addition  
[C] additive identity property  
[D] distributive property

8. 010720a, P.I. A.N.1

If  $M$  and  $A$  represent integers,  
 $M + A = A + M$  is an example of which  
property?

- [A] commutative      [B] associative  
[C] closure          [D] distributive

9. 080601a, P.I. A.N.1

While solving the equation  $4(x + 2) = 28$ ,  
Becca wrote  $4x + 8 = 28$ . Which property did  
she use?

- [A] identity            [B] distributive  
[C] associative        [D] commutative

10. 080504a, P.I. A.N.1

The equation  $*(\Delta + \Diamond) = * \Delta + * \Diamond$  is an  
example of the

- [A] transitive law      [B] commutative law  
[C] distributive law  
[D] associative law

11. 060413a, P.I. A.N.1

Which property of real numbers is illustrated  
by the equation  $-\sqrt{3} + \sqrt{3} = 0$

- [A] commutative property of addition  
[B] associative property of addition  
[C] additive inverse      [D] additive identity

12. 060306a, P.I. A.N.1

Tori computes the value of  $8 \times 95$  in her head  
by thinking  $8(100 - 5) = 8 \times 100 - 8 \times 5$ .  
Which number property is she using?

- [A] associative            [B] closure  
[C] distributive          [D] commutative

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[1] D

[2] D

[3] A

[4] D

[5] B

[6] A

[7] C

[8] A

[9] B

[10] C

[11] C

[12] C