Name_____ Date_____ Block___

A.3

1.

Which is an example of the commutative property of addition?

A $3 + 5m = 3 + (1 + 4)m$
B $3 + 5m = 5m + 3$
C $3 + 5m = (3 + 5)m$
D $3 + 5m = 3m + 5$

2.

What property of real numbers justifies the following statement?

$4x(y + 2) - 3y$ is equivalent to $4x(y) + 4x(2) - 3y$

A The associative property of multiplication
B The commutative property of multiplication
C The distributive property of multiplication over addition
D The closure property of multiplication

3.

Which property justifies the following statement?

If $3a + 3b = 12$ then $3(a + b) = 12$

A Commutative property of multiplication
B Distributive property for multiplication over addition
C Multiplicative identity property
D Associative property of addition

4.

Which statement *cannot* be justified by one of the properties of real numbers?

F $(a + b) + c = a + (b + c)$
G $a - (b \div c) = (a - b) \div c$
H $(ab)c = a(bc)$
J $(a + b) + 0 = 0 + (a + b)$

5.

Which property of real numbers is utilized by rewriting $11x + 5xy$ as $x(11 + 5y)$?

A Associative property for addition
B Commutative property for addition
C Closure property for multiplication
D Distributive property for multiplication over addition

6.

Which statement is *always* true?

A $4 + a = 4 \cdot a$
B $a + (-4 + 4) = a + 0$
C $a \div 4 = 4 \div a$
D $4 - a = a - 4$

7.

Consider the procedure used below to solve the given equation.

Given: $3(x - 2) = 17$

(1st step) $3x - 6 = 17$

(2nd step) $3x = 23$

(3rd step) $x = \frac{23}{3}$

Which of the following properties is a justification for the 1st step?

A Associative property of addition
B Commutative property of addition
C Distributive property
D Transitive property of equality