

<p>1 Which is an example of the commutative property of addition?</p> <p>A $3 + 5m = 3 + (1 + 4)m$ B $3 + 5m = 5m + 3$ C $3 + 5m = (3 + 5)m$ D $3 + 5m = 3m + 5$</p>	<p>2 Which property justifies the following statement?</p> <p>If $3a + 3b = 12$ then $3(a + b) = 12$</p> <p>A Commutative property of multiplication B Distributive property for multiplication over addition C Multiplicative identity property D Associative property of addition</p>
<p>3 What property of real numbers justifies the following statement?</p> <p>$4x(y + 2) - 3y$ is equivalent to $4x(y) + 4x(2) - 3y$</p> <p>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</p>	<p>4 The statement</p> <p>“If $\frac{1}{2}x = 5$, then $x = 10$”</p> <p>is justified by the —</p> <p>F associative property of multiplication G commutative property of multiplication H addition property of equality J multiplication property of equality</p>
<p>5 Which statement is <i>always</i> true?</p> <p>A $4 + a = 4 \cdot a$ B $a + (-4 + 4) = a + 0$ C $a \div 4 = 4 \div a$ D $4 - a = a - 4$</p>	<p>6 Which statement <i>cannot</i> be justified by one of the properties of real numbers?</p> <p>F $(a + b) + c = a + (b + c)$ G $a - (b \div c) = (a - b) \div c$ H $(ab)c = a(bc)$ J $(a + b) + 0 = 0 + (a + b)$</p>
<p>7 What is $g(2)$ for $g(x) = \frac{1}{2}x^3 + 2x$?</p>	<p>8 $4\sqrt[3]{x} - \sqrt{y}$ where $x = 64$ and $y = 81$</p>
<p>9 The function $f(x) = 35 + 15x$ represents the amount of money, in dollars, Mr. Lewis earns for working x hours. How much money does Mr. Lewis earn for working 25 hours?</p> <p>A \$75 B \$375 C \$410 D \$1,250</p>	

10 If $f(x) = \frac{\sqrt{9-x}}{4}$ what is $f(5)$?	11 What is the value of the expression $\frac{1}{4}(x^2 - y^3)$ when $x = 5$ and $y = 1$?
12 What is the value of $\frac{6x - 3y}{xy}$?	13. What is the value of the expression $\frac{x^y + z}{z}$ if $x = 4$, $y = 2$, and $z = 2$?
14 What is the value of $3x + 4y$ if $x = \frac{1}{3}$ and $y = \frac{1}{2}$?	
15 Lincoln High School earned \$5,100 in ticket sales for a play. The cost per ticket was \$12. Let t represent the number of tickets sold to the play. Which of the following equations could be used to determine how many tickets were sold to the play?	
16 Which statement could be represented by the expression $n^2 + 4n$?	

17 Joe, who is the youngest member of the wrestling team at Northwood High School, is 5 years less than one-half the age of the coach. If the coach is n years old, which expression describes Joe's age?

F $\frac{1}{2}n - 5$

G $5 - \frac{1}{2}n$

H $2n + 5$

J $2n - 5$

18. If 112 children sign up for a field trip and each vehicle carries x children, which expression could be used to determine the number vehicles needed for the trip?

A $112 - x$

B $112x$

C $\frac{112}{x}$

D $\frac{x}{112}$

19. Circle the verbal statements that correctly represent the algebraic expression $2n - 3$. You must circle all the correct statements

Three less than half a number, n	The difference between twice a number, n , and three	A number, n , doubled less than three
Half a number, n , less than three	Three less than a number, n , doubled	The difference between three and twice a number, n

20. Circle each expression that is equivalent to -2.

$-3 x - y + 4$, when $x = 3$ and $y = 5$	$\frac{x + 2y}{xy}$, when $x = \frac{1}{2}$ and $y = \frac{1}{4}$
$\frac{(6 - w)^y - 13}{3y - 4y}$, when $w = 9$ and $y = 2$	$\frac{x^3 + x^2}{-x}$, when $x = -2$