NAME _____ DATE _____ PERIOD _____

Accelerated Math 7 Chapter 7 Practice Test

1. Which expression is equivalent to $4(15 - 7)$? **A.** $(15 + 4) - (7 + 4)$ **B.** $(15 - 7) + (15 - 4)$ **C.** $15(4) - 7(4)$ **D.** $4(15) + 4(7)$	1. C
2. Which of the following expressions can be written as $10(x - y)$? **A.** $10x \cdot 10y$ **B.** $10xy - 10yx$ **C.** $10x \cdot (-y)$ **D.** $10x - 10y$	2. D
3. On a school trip to the space museum, 30 students visited the astronaut exhibit. Tickets for admission cost \$18. Which expression can be used to mentally compute the total cost of admission tickets? $18 = 10 + 8$ **A.** $30(10 + 8)$ **B.** $15 \cdot 2 + 10 \cdot 8$ **C.** $15(2 + 8)$ **D.** $30(10 - 8)$	3. A
4. Identify the like terms in the expression $7x + 4y + 3y + 7$. $= 7x + 7y + 7$ **A.** $7x$ and 7 **B.** $4y$ and $3y$ **C.** 7, 4, and 3 **D.** 7 ↳ TERMS YOU CAN COMBINE	4. B
5. The area of a triangle can be determined by $\frac{1}{2}bh$, where b is the length of the base and h is the height. What is the coefficient in the expression $\frac{1}{2}bh$? **A.** b **B.** h **C.** $\frac{1}{2}$ $\frac{1}{2}(bh)$ **D.** 1	5. C
6. Which of the following expressions correctly combines like terms? **A.** $4x + 7 + 2x - 4y = 6x + 3y$ **B.** $2x + 7y + 2x - 4y = 4x + 3y$ $2x + 2x + 7y + -4y$ **C.** $2x + 7y + 2x - 4 = 4x + 3y$ **D.** $4x + 7y + 2x + 4y = 6x + 3y$	6.
7. Mateo and Haley both collect coins. Mateo has 8 more coins in her collection than Haley. Which expression represents the total number of coins in both collections? **A.** $2c + 8$ TOTAL **B.** $c + 8$ MATEO **C.** $2c(8)$ **D.** $8 - 2c$	7. A
8. Bradley rents a fishing boat for the day. The total cost for gasoline is represented by the expression $3.25m + 15$. What is the constant in the expression? **A.** 3.25 COEFFICIENT **B.** 15 ← CONSTANT **C.** m ← VARIABLE **D.** $3.25m$	8. B
9. What is the GCF of $100xyz$ and $25xz$? $25xz$ $100xyz : 4 \cdot 25 \cdot x \cdot y \cdot z$ $25xz : 1 \cdot 25 \cdot x \cdot z$	9. $25xz$

$4y + 3y$ ← BOTH LIKE TERMS

$4y^2 + 3y$ ← NOT LIKE TERMS

$\frac{1}{2}bh + 2h$

10. A triangle has side lengths of $(4x - 10)$ units, $(2x + 6)$ units, and $5x$ units. Which expression represents the perimeter of the triangle?

A. $(11x + 16)$ units **C.** $(11x - 4)$ units

B. $(6x - 4 + 5)$ units **D.** $(14x + 8x + 5x)$ units

$(4x + -10) + (2x+6) + 5x$

X	ONES
4x	-10
2x	6
5x	0
11x +	-4

10. C

11. The expression $(2.2x + 8)$ represents the number of miles Trent jogged during a race, and $5x$ represents the number of miles that Ling jogged during the same race, in x hours. Write an expression to show how many more miles Ling jogged than Trent.

$5x - (2.2x + 8)$ $5x - 2.2x = 2.8x$

11. $2.8x - 8$

12. Rewrite the following expression using the Distributive Property.

$13 \cdot 16 \cdot -1$ $13 \cdot (-16) + 14 \cdot 16$ $-208 + 224$ $208(14 - 16)$ $x(y+z)$ $16(-13 + 14)$

12. $16(-13 + 14)$ $x(m + n)$

13. The width of a rectangle is $4x$ units and its length is $(6x - 2)$ units. What happens to the area of the rectangle if the length is doubled?

4 | 12 | 3 B | 24 | 3 6 | 48 | B

13. AREA WOULD DOUBLE

14. Write an expression in factored form that is equivalent to the expression $\frac{3}{4}x + 24$.

$24 \div \frac{3}{4} = 24 \cdot \frac{4}{3} = 32$

14. $\frac{3}{4}(x + 32)$

An animal hospital provides aid to sick and injured sea turtles. The cost of visiting the hospital for x number of visitors is shown in the table.

$(15x+10)$ $5(3x+2)$

Admission Cost	
Admission Ticket	**Cost ($)**
weekday	$7.50x + 5$
weekend	$15x + 10$

$7.50x + 5$ $15x + 10$ $22.5x + 15$ $1.5(10)^5$

15. ~~$(15x + 10)$~~ $7.5(3x + 2)$

15. Write an expression in factored form that is equivalent to the sum of weekday and weekend tickets.

16. Write an expression to show how much greater the cost is for a weekend ticket than a weekday ticket. $(15x + 10) - (7.5x + 5)$

16. $7.5x + 5$ TWICE AS EXPENSIVE

17. The perimeter of a square-shaped garden is $(12x + 20)$ feet. Write an expression to represent the length of one side of the garden.

$\frac{12x + 20}{4} = \frac{12x}{4} + \frac{20}{4} = 3x + 5$

17. $3x + 5$

18. Which expression in factored form is equivalent to $\frac{1}{5}x + 10$?

A. $\frac{1}{5}(x + 50)$ **C.** $\frac{1}{5}(10x + 50)$

B. $5(x - 10)$ **D.** $5(10x - 5)$

$\frac{1}{5}x + 10$

18. A

$5x - 2.2x = 2.8x$

EVALUATE FOR $x = 10$

$5x - (2.2x + 8)$

$5(10) - (2.2(10) + 8)$

$50 - (22 + 8)$

$50 - 30 = 20$

$2.8x + 8$

$2.8(10) + 8 = 36$

$2.8x - 8$

$2.8(10) - 8 = 20$

$(5x + 0) - (2.2x + 8)$

$+(-2.2x + -8)$

X's	ONES
$5x$	0
$-2.2x$	-8

$2.8x + -8 = 2.8x - 8$

$13 \cdot (-16) + 14 \cdot 16$

$13 \cdot 16 \cdot -1 + 14 \cdot 16$

$16(-13 + 14)$

$8 \cdot 5 + -4 \cdot 5$

$5(8 + -4)$

$14z + 21x$

$7(2z + 3x)$

$7y + 7$ FOR $y = 3$

EVALUATE

$7(3)+7$

$21+7$

28