

**Accelerated Math 7 Chapter 7 Practice Test 2022**

<p>1. Which expression is equivalent to <math>4(15 - 7)</math>?</p> <p>A. <math>(15 + 4) - (7 + 4)</math>                      C. <math>15(4) - 7(4)</math>            B. <math>(15 - 7) + (15 - 4)</math>                      D. <math>4(15) + 4(7)</math></p>	<p>1.</p> <p style="text-align: center; font-size: 2em;">C</p>
<p>2. Which of the following expressions can be written as <math>10(x - y)</math>?</p> <p>A. <math>10x \times 10y</math>                                  C. <math>10x \cdot (-y)</math>            B. <math>10xy - 10yx</math>                                  D. <math>10x - 10y</math></p>	<p>2.</p> <p style="text-align: center; font-size: 2em;">D</p>
<p>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?</p> <p>A. <math>30(10 + 8)</math>                                  C. <math>15(2 + 8)</math>            B. <math>15 \cdot 2 + 10 \cdot 8</math>                                  D. <math>30(10 - 8)</math></p>	<p>3.</p> <p style="text-align: center; font-size: 2em;">A</p> <p style="text-align: center;"><math>30(18)</math>  <math>30(10) + 30(8)</math></p>
<p>4. Identify the like terms in the expression <math>7x + 4y + 3y + 7</math>.</p>	<p>4.</p> <p style="text-align: center; font-size: 1.5em;">4y, 3y</p>
<p>5. The area of a triangle can be determined by <math>\frac{1}{2}bh</math>, where <math>b</math> is the length of the base and <math>h</math> is the height. What is the coefficient in the expression <math>\frac{1}{2}bh</math>?</p>	<p>5.</p> <p style="text-align: center; font-size: 2em;"><math>\frac{1}{2}</math></p> <p style="text-align: center;">↑ ALWAYS A NUMBER</p>
<p>6. Which of the following expressions correctly combines like terms?</p> <p>A. <math>4x + 7 + 2x - 4y = 6x + 3y</math>            B. <math>2x + 7y + 2x - 4y = 4x + 3y</math>            C. <math>2x + 7y + 2x - 4 = 4x + 3y</math>            D. <math>4x + 7y + 2x + 4y = 6x + 3y</math></p>	<p>6.</p> <p style="text-align: center; font-size: 2em;">B</p>
<p>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?</p> <p>A. <math>2c + 8</math>                      B. <math>c + 8</math>                      C. <math>2c(8)</math>                      D. <math>8 - 2c</math></p>	<p>7.</p> <p style="text-align: center; font-size: 1.5em;"><math>c + c + 8</math>  <math>2c + 8</math> (A)</p>
<p>8. Bradley rents a fishing boat for the day. The total cost for gasoline is represented by the expression <math>3.25m + 15</math>. What is the constant in the expression?</p>	<p>8.</p> <p style="text-align: center; font-size: 2em;">15</p>
<p>9. What is the GCF of <math>100xyz</math> and <math>25xz</math>?</p>	<p>9.</p> <p style="text-align: center; font-size: 1.5em;">25xz</p>

$100xyz = 4 \cdot 25 \cdot x \cdot 4 \cdot z$                        $25xz = 25 \cdot x \cdot z$   
 ↑ ↑                      ↑ ↑                      GCF OF 100 AND 25 = 25  
 ↑ ↑                      ↑ ↑

<p>10. A triangle has side lengths of <math>(4x - 10)</math> units, <math>(2x + 6)</math> units, and <math>5x</math> units. Which expression represents the perimeter of the triangle?</p> <p>A. <math>(11x + 16)</math> units            B. <math>(6x - 4 + 5)</math> units            C. <math>(11x - 4)</math> units            D. <math>(14x + 8x + 5x)</math> units</p>	<p>10.</p> $\begin{array}{r} x \ 1 \\ 4x \ -10 \\ 2x \ +6 \\ 5x \ \\ \hline 11x - 4 \end{array}$								
<p>11. The expression <math>(2.2x + 8)</math> represents the number of miles Trent jogged during a race, and <math>5x</math> represents the number of miles that Ling jogged during the same race, in <math>x</math> hours. Write an expression to show how many more miles Ling jogged than Trent.</p> <p style="text-align: center;"><i>LING - TRENT</i></p> $5x - (2.2x + 8) = 5x - 2.2x - 8$	<p>11.</p> $\begin{array}{r} x \ 1 \\ 5x \ 0 \\ 2.2x \ +8 \\ \hline 2.8x - 8 \end{array}$								
<p>12. Rewrite the following expression using the Distributive Property.</p> $13 \cdot (-16) + 14 \cdot 16$ <p style="text-align: center;"><i>SEE NEXT PAGE</i></p> $16(-13 + 14)$	<p>12.</p> $16(-13 + 14)$								
<p>13. The width of a rectangle is <math>4x</math> units and its length is <math>(6x - 2)</math> units. What happens to the area of the rectangle if the length is doubled?</p> <p style="text-align: center;"><i>SEE NEXT PAGE</i></p>	<p>13.</p> <p style="text-align: center;"><i>IF YOU DOUBLE THE LENGTH YOU ALSO DOUBLE THE AREA</i></p>								
<p>14. Write an expression in factored form that is equivalent to the expression <math>\frac{3}{4}x + 24</math>.</p> <p style="text-align: center;"><i>SEE NEXT PAGE</i></p>	<p>14.</p> $\frac{3}{4}(x + 32)$								
<p>An animal hospital provides aid to sick and injured sea turtles. The cost of visiting the hospital for <math>x</math> number of visitors is shown in the table.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>10</p> <math display="block">\begin{array}{r} x \ 1 \\ 15x \ 10 \\ 7.5x \ 5 \end{array}</math> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #cccccc;"> <th colspan="2">Admission Cost</th> </tr> <tr> <th>Admission Ticket</th> <th>Cost (\$)</th> </tr> </thead> <tbody> <tr> <td>✓ weekday</td> <td><math>7.50x + 5</math></td> </tr> <tr> <td>✓ weekend</td> <td><math>15x + 10</math></td> </tr> </tbody> </table> <div style="text-align: center;"> <p>15</p> <math display="block">\begin{array}{r} x \ 1 \\ 7.50x \ 5 \\ 15x \ 10 \\ 22.50x + 15 \end{array}</math> <p><i>ADDITION</i></p> </div> </div> <p>15. Write an expression in factored form that is equivalent to the <u>sum</u> of weekday and weekend tickets.</p> <p>16. Write an expression to show how much <u>greater</u> the cost is for a weekend ticket than a weekday ticket.</p> <p style="text-align: center;"><i>SUBTRACTION</i></p>	Admission Cost		Admission Ticket	Cost (\$)	✓ weekday	$7.50x + 5$	✓ weekend	$15x + 10$	<p>15.</p> $22.50x + 15$ $7.5(3x + 2)$ <p>16.</p> $7.50x + 5$ <p style="text-align: center;"><i>THE WEEKEND IS DOUBLE THE WEEKDAY</i></p>
Admission Cost									
Admission Ticket	Cost (\$)								
✓ weekday	$7.50x + 5$								
✓ weekend	$15x + 10$								
<p>17. The perimeter of a square-shaped garden is <math>(12x + 20)</math> feet. Write an expression to represent the length of one side of the garden.</p> $\frac{12x + 20}{4}$ <div style="display: flex; align-items: center; justify-content: center; margin-top: 10px;"> <div style="border: 1px solid green; width: 40px; height: 40px; margin-right: 10px;"></div> <math>3x + 5</math> </div>	<p>17.</p> $3x + 5$								
<p>18. Which expression in factored form is equivalent to <math>\frac{1}{5}x + 10</math>?</p> <p>A. <math>\frac{1}{5}(x + 50)</math>            B. <math>5(x - 10)</math>            C. <math>\frac{1}{5}(10x + 50)</math>            D. <math>5(10x - 5)</math></p>	<p>18.</p> <p style="text-align: center; font-size: 2em;">A</p>								

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

$$(13 \cdot \underline{16} \cdot -1) + (14 \cdot \underline{16})$$

$$\frac{13}{14} = \frac{1 \cdot 13}{1 \cdot 14}$$

2.7

$$16(-13+14)$$

$4x$	$24x^2$	$-8x$	$24x^2 - 8x$
	$6x$	$-2$	

$6x-2$

$$4x(6x) \quad 4x \cdot (-2)$$

$$4 \cdot x \cdot 6 \cdot x \quad 4 \cdot x \cdot -2$$

$$4 \cdot 6 \cdot x \cdot x \quad 4 \cdot -2 \cdot x$$

$$\quad \quad \quad \checkmark \quad \checkmark \quad \quad -8x$$

$$\quad \quad \quad 24 \quad x^2$$

$$\frac{3}{4}x + 24 = \frac{3}{4}(x + 32)$$

$$\frac{\frac{3}{4}x}{\frac{3}{4}}$$

$$\frac{24}{\frac{3}{4}} = 24 \div \frac{3}{4} = \frac{24 \cdot 4}{1 \cdot 3} = \frac{32}{1} = 32$$