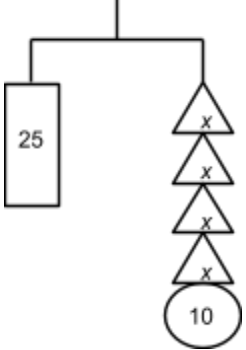


Math 7 Plus Unit 2
Expressions, Equations, and Inequalities
Additional Practice Problems

<p>1) What is the weight of each triangle?</p> 	<p>2) Combine like terms. $14m - 9n + 2n - 3(3m - 4)$</p>
<p>3) Select all statements that are translations of the equation. $5x - 4 = 15$</p> <p>A. Four less than the product of five and a number, x, is fifteen.</p> <p>B. The product of five and a number, x, less than four is equal to fifteen.</p> <p>C. Four subtracted from the quantity of five times a number is equal to fifteen.</p> <p>D. The quantity of five times a number subtracted from four is fifteen.</p>	<p>4) Solve for the variable in each part.</p> <p>A) $-2d - 16 = -8$ B) $-36 = -4(-2f + 3)$</p> <p>C) $2(3.5x + 4.5) = 79$</p> <p>D) $-3.4g - (-1.67) = 9.49$</p>
<p>5) Select all equations that have a solution of -6.</p> <p>A. $-3j = 18$ B. $2\left(\frac{3}{2} - 5k\right) = 63$</p> <p>C. $\frac{-m-0.72}{3.2} = 5.4$ D. $\frac{3}{4}n - \left(\frac{7}{8}n - 3\right) = 0$</p>	<p>6) Which equation is the best translation of the below statement?</p> <p style="text-align: center;">Two multiplied with the difference of a number and twelve is ten.</p> <p>A. $2x - 12 = 10$</p> <p>B. $2(x - 12) = 10$</p> <p>C. $(x - 12) \cdot 2 = 10$</p> <p>D. $-2x + 12 = 10$</p>

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7) Define the variable and write an equation that best represents the scenario. Then, solve.

Joaquin and his three friends are going to the movie theater. They pay a total of \$62.86, which includes a large popcorn that costs \$8.10. How much did each movie ticket cost?

Define the variable: _____

Write the equation: _____

Solve.

Solution: _____

8) Define the variable and write an inequality that best represents the scenario. Then, solve.

Joaquin is going to the movie theater again. His mother gave him \$75.00 to pay for himself and some friends. He knows that he is going to spend \$16.20 on popcorn to share and each ticket costs \$10.79. At most, how many people can go to the movies this time?

Define the variable: _____

Write the inequality: _____

Solve.

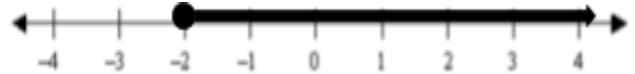
Solution: _____

9) Solve and graph the inequality.



$$10 + 2(-x + 3) - (x - 5) < 30$$

10) Select **all** inequalities that match this graph.



A) $-6x \leq 12$

B) $-\frac{1}{2} \leq \frac{1}{4}x$

C) $2x - 2 \leq 2$

D) $-2x - 2 \leq 2$

11) This upcoming year the monthly rent of Sasha's apartment is increasing by 5%. Her new rent will be \$1250. Select **all** equations that would allow for Sasha to determine her previous monthly rent.

A. $m + 0.05m = 1250$

B. $5m = 1250$

C. $1.05m = 1250$

D. $1.5m = 1250$

E. $m + 0.5m = 1250$

F.

$(1 + 0.05)m = 1250$

12) Which solution set works for this inequality?

$$8 - 16x > 4$$

A) $\{-1, 0, 1\}$

B) $\{-1, 0, \frac{1}{2}\}$

C) $\{-1, 0, \frac{1}{4}\}$

D) $\{-1, 0, \frac{1}{8}\}$

Math 7 Plus Unit 2
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13) Determine the solution for the inequality.

$$\frac{m-2}{-6} \geq -\frac{3}{4}$$

A. $m \geq \frac{13}{2}$

B. $m \leq \frac{-15}{2}$

C. $m \geq \frac{29}{4}$

D. $m \leq \frac{13}{2}$

14) Define the variable and write an equation that best represents the scenario. Then, solve.

Starting at 12:00pm the temperature was 83°F. The temperature started to drop 3 degrees every two hours. Later, the temperature reached 72.5°F. How many hours passed from noon until the temperature was checked again?

Define the variable: _____

Write the equation: _____

Solve.

Solution: _____

15) Circle **all** expressions that are equivalent to the given expression.

$$-4.25 - 3(4.1x - 3.5) + 2.1x$$

A. $-4.25 - 12.3x + 10.5 + 2.1x$

B. $-4.25 - 12.3x - 10.5 + 2.1x$

C. $6.25 - 10.2x$

D. $14.4x + 6.25$

E. -3.95

F. $-3.95x$

16) Solve the equation.

$$4 = \frac{-\frac{1}{4}(10x+5) - (\frac{5}{6}x + \frac{3}{4})}{\frac{7}{8}}$$

Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in the answer. Answers that are mixed numbers must be entered as an improper fraction or decimal. Please record the solution in the grid.

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Math 7 Plus Unit 2

Expressions, Equations, and Inequalities

Additional Practice Problems

17) Omar is creating a rectangular border for a drawing measured using inches. The length of the border is $3\frac{1}{2}$ more than 8 times the width. The perimeter of the border is $11\frac{1}{2}$ inches. What is the width of the border?

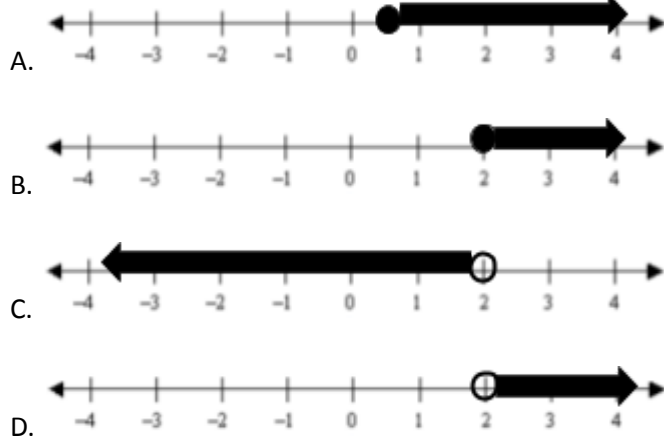
Only 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ., -, and / are allowed in the answer. Answers that are mixed numbers must be entered as an improper fraction or decimal. Please record the solution in the grid.



18) At practice, Malia does three times as many burpees as Deeksha and also 10 pull-ups. She does 61 exercises in all. The equation $3n + 10 = 61$ represents this scenario. What does n represent?

- A. The number of burpees Deeksha does.
- B. The number of pull-ups Deeksha does.
- C. The number of burpees Malia does.
- D. The number of pull-ups Malia does.

19) Which number line shows all values of x that make the inequality $5 - (\frac{1}{2}x + 20) < -16$ true?



20) Han received a \$65 gift card to the Crocs store. He plans to purchase a new pair for \$39.99. Each new charm is \$3.99. Which inequality represents this situation, where c is the number of charms Han can purchase.

- A. $65 \geq 39.99 + 3.99c$
- B. $65 \leq 39.99 + 3.99c$
- C. $65 \geq 39.99 - 3.99c$
- D. $65 \leq 39.99 - 3.99c$



#9, #10, and #19 Number lines are adapted from <https://www.onlinemathlearning.com/integer-number-line.html>.

#20 Image adapted from <https://www.crocs.com/>.