Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 7 LESSON 5

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| AIM: | SWBAT solve one-step equations |

**THINK ABOUT IT!**

Represent and solve each equation below using a model.

22 = n + 17 35 = 5m

p – 19 = 34 $\frac{45}{x}=5$

Key Point

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**Interaction with New Material**

*Ex. 1)* What is the solution of the equation below? 2.5n = 17.5

*Ex. 2)* What value of x makes the equation below true? $\frac{x}{2.1}=1\frac{1}{2}$

**PARTNER PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
	+ Bar model is drawn accurately and labeled
	+ All calculations are shown, neatly organized, and labeled
	+ Answer statement is provided and boxed
	+ Check is completed

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| *Bachelor Level* |

**Directions:** Draw a model to solve each equation and check your answer using substitution.

1. 9 ¼ = 5d
2. $\frac{24.5}{n}=10$
3. 9.05 + h = 12.2

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| *Master Level* |

1. Use the equation below to determine which statements below are true and which are false.

$$\frac{f}{2.2}=5\frac{2}{5}$$

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| *f* is greater than $5\frac{2}{5}$ |  |  |
| To solve for *f*, divide $5\frac{2}{5} $by 2.2 |  |  |
| It is not possible to solve for *f* |  |  |
| *f* = 5.28 |  |  |

**INDEPENDENT PRACTICE**

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
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	+ All calculations are shown, neatly organized, and labeled
	+ Answer statement is provided and boxed
	+ Check is completed

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| *Bachelor Level* |

**Directions:** Draw a model to solve each equation and check your answer using substitution.

1. 1.6a = 5.12
2. $3.6=\frac{9}{b}$
3. 12 ¼ = 11 ¾ + g
4. Jeremy solve the equation $4\frac{1}{2}-m=1.5$ and said that *m*= 6. What is the error in Jeremy’s thinking? Explain.

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| *Master Level* |

**Directions:** Draw a model to solve each equation and check your answer using substitution.

1. $\frac{3.15}{k}=0.5$
2. Which equation or equations has/have a solution of x = 2.5? Select all that apply.
	1. 9 – m = 7 ½
	2. 5.35 = 2.85 + n
	3. $\frac{8.75}{x}=3.5$
	4. 3.75 = 1½x
3. John’s friend told him that he could earn $49 for handing out flyers at a local concert. John wants to calculate the hourly rate, *x*. If he works a total of 3.5 hours, the equation 3.5x = 49 can be used to determine his hourly rate. What would John’s hourly rate be, in dollars?

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| *PhD Level* |

1. A carpenter built three bookcases, A, B, and C, to stand next to each other along a wall. The total length of the wall is 456 centimeters. The carpenter will build two more bookcases, D and E, along the same wall. These two bookcases will have equal widths. The widths of bookcases A, B, and C are shown in the table below.



Write and solve and equation to determine *w*, the greatest possible width for bookcases D and E.

* CFS for top quality work
	+ Problem is annotated with margin notes to provide additional meaning
	+ Bar model is drawn accurately and labeled
	+ All calculations are shown, neatly organized, and labeled
	+ Answer statement is provided and boxed
	+ Check is completed

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

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| Self-assessment | I mastered the learning objective today. | I am almost there.  | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there.  | You need more practice and feedback. |

1. What value of q makes the equation true? q – 15 =10.2

A) 4.8

B) 11.7

C) 25.2

D) 153

1. What value for x makes the equation $\frac{13.5}{x}=4.5$ true?
2. What value of g makes 12.5 – g = 8 ¾ true?