

NAME _____

DATE _____

Module Test B Module 3

1. List the property of equality used in each step to solve the following problem.

$2h - 6 = -5h - \frac{16}{3}$ Given

- a. $6h - 18 = -15h - 16$ _____
- b. $21h - 18 = -16$ _____
- c. $21h = 2$ _____
- d. $h = \frac{2}{21}$ _____

2. Solve the following equations by inspection.

- a. $6x = 24$ _____
- b. $a - 10 = 23$ _____
- c. $\frac{j}{3} = 6$ _____
- d. $M - 12 = 5$ _____

3. Rewrite the following equations for the requested variable.

- a. $k = h + 3g$ for g _____
- b. $3Rk = j + 28$ for k _____
- c. $3x + 5 = 2y$ for x _____
- d. $A = \pi vr$ for r _____

4. Determine if the following equations are one-step, two-step, or multi-step equations. Solve the equations to find the value of the variable.

- a. $3n + 2n = -6n + 11$ _____
- b. $4l = 24$ _____
- c. $9K = 3K + 12$ _____
- d. $3Z - 5 = 23 + 7Z$ _____

5. List the property of equality used below.

- a. If $2r = g$ and $g = 3v$, then $2r = 3v$. _____
- b. $13 = 13$ _____
- c. If $3 - x^2 = 3y$, then $3y = 3 - x^2$. _____
- d. If $9h = 9$, then $h = 1$. _____

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Solve the following linear equations.

6. $2m = 6$ _____

7. $6h = 5h - 13$ _____

8. $10 = 7 + 5x$ _____

9. $6m - 7 = -8$ _____

10. $3K = \frac{2}{7}$ _____

Are the following pairs of statements true or false?

11. $h = 3 + t$ and $t = h + 3$

12. $4K = 3(5 + K)$ and $K = 15$

13. $4L = 1 + 5W$ and $2 = 4L + 5W$

14. $C = 2\pi r$ and $\pi = \frac{C}{2r}$

15. $11 - p = 3 + p$ and $p = 4$

True or False, $x = 3$ is a solution to the following equations.

16. $2x + 3 = 9$

17. $x + 10 = 7x - 7$

18. $\frac{21}{x} = 4 + x$

19. $15x = \frac{45}{x} + 3$

20. $12 = 5x - 3$

Answer the following questions:

16. Explain why it is sometimes useful to rewrite the following formula: $A = \frac{1}{2}bh$

17. Give an example of the Symmetric Property of Equality:

