Module 6 Review

Short Answer

1. Solve: $9x - 15 = 3$
2. Solve: $8 = 5 + \frac{x}{2}$
3. Solve: $3(x + 5) = 12$
4. Solve: $2.5 = \frac{7.5}{p}, p \neq 0$
5. Solve: $4v - 9 = -21$
6. Solve: $9 - 3x = 4x - 12$
7. Solve: $\frac{x}{4} + \frac{7}{2} = \frac{11}{4}$
8. Solve: $4 + x \leq 8$
9. Solve: $4 + \frac{3}{4}x < 16$
10. Solve: $27 = \frac{-4x}{5} + 7$
11. Here is a student's solution for this question:
    Solve: $\frac{-5x}{4} = 2$

    $$\frac{-5x}{4} = 2$$
    $$\frac{-5x}{4} \times 4 = 2 \times 4$$
    $$-5x = 6$$
    $$-5x + 5 = 6 + 5$$
    $$x = 11$$

    Identify any errors in the solution.
12. A student solved this equation: $3(2x - 5) = 7 - 3x$

$$
\begin{aligned}
3(2x-5) &= 7-3x \\
6x-5 &= 4x \\
6x-5+5 &= 4x+5 \\
6x &= 4x+5 \\
6x-4x &= 4x+5-4x \\
2x &= 5 \\
x &= 2.5
\end{aligned}
$$

Identify any errors the student made.

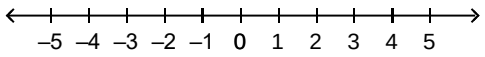
13. Solve: $\frac{3}{4}(4x-5) = \frac{1}{2}(3x+4)$

14. Solve: $6w-4 \geq 5w-2$

15. Solve: $14.4-1.8b > 20.52$

16. Write, then solve an inequality to show how many magazines you would have to sell at \$5 each to raise at least \$200.

17. Solve $5+\frac{2}{3}w > 4$. Graph the solution.



18. Solve: $3(1.6x+6.8) > 2(10.92+0.6x)$

Module 6 Review
Answer Section

SHORT ANSWER

1. ANS:
   2

2. ANS:
   6

3. ANS:
   –1

4. ANS:
   $p = 3$

5. ANS:
   $v = -3$

6. ANS:
   $x = 3$

7. ANS:
   $x = –3$

8. ANS:
   $x \leq 4$

9. ANS:
   $x < 16$

10. ANS:
    –25

11. ANS:
    Errors: After multiplying both sides by 4, the student should divide both sides by –5, not add 5 to both sides.

12. ANS:
    Errors:
    The student forgot to multiply –5 by 3 when using the distributive property.
    $7 - 3x$ is not equal to $4x$.

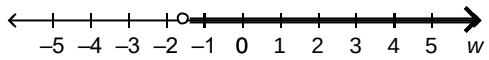
13. ANS:
    $x = 3\frac{5}{6}$

14. ANS:
$w \geq 2$

15. ANS:
$b < -3.4$

16. ANS:
Let m represent the number of magazines.
$5m \geq 200$
$m \geq 40$

17. ANS:
$w > -1.5$



18. ANS:
$x > 0.4$