

WORKSHEET # 5 [2.4, 2.5, & 2.6]

1. Thor's average driving speed is 1 km/h faster than Mia's. In the same length of time it takes Thor to drive 264 km, Mia drives only 261 km. What is Thor's average speed?

[A] 86 km/hr [B] 87 km/hr
[C] 89 km/hr [D] 88 km/hr

[1] _____

6. A solution of 49% alcohol is to be mixed with a solution of 29% alcohol to form 120 liters of a 41% solution. How many liters of the 49% solution must be used?

[A] 85 liters [B] 72 liters
[C] 100 liters [D] 62 liters

[6] _____

2. Train A leaves a station traveling at 80 km/h. Six hours later, train B leaves the same station traveling in the same direction at 100 km/h. How long does it take train B to catch up to train A?

[2] _____

7. Train A leaves a station traveling at 64 km/h. Four hours later, train B leaves the same station traveling in the same direction at 84 km/h. How long does it take train B to catch up to train A?

[7] _____

3. A solution of 68% fertilizer is to be mixed with a solution of 29% fertilizer to form 351 liters of a 60% solution. How many liters of the 68% solution must be used?

[A] 289 liters [B] 170 liters
[C] 279 liters [D] 310 liters

[3] _____

8. Train A leaves a station traveling at 80 km/h. Four hours later, train B leaves the same station traveling in the same direction at 100 km/h. How long does it take train B to catch up to train A?

[8] _____

4. A solution of 51% fertilizer is to be mixed with a solution of 23% fertilizer to form 168 liters of a 49% solution. How many liters of the 51% solution must be used?

[A] 146 liters [B] 156 liters
[C] 161 liters [D] 79 liters

[4] _____

9. Solve for A in $B = \frac{6}{7}(A - 11)$.

[A] $\frac{7B + 66}{6}$ [B] $\frac{7B + 60}{7}$
[C] $\frac{7B + 77}{6}$ [D] $\frac{7B + 71}{7}$

[9] _____

5. A solution of 74% fertilizer is to be mixed with a solution of 27% fertilizer to form 94 liters of a 53% solution. How many liters of the 74% solution must be used?

[A] 52 liters [B] 67 liters
[C] 42 liters [D] 48 liters

[5] _____

10. Solve for A in $B = \frac{2}{5}(A - 11)$.

[10] _____

11. Solve for A in $B = \frac{2}{3}(A - 11)$.

[11] _____

12. Solve for y in the equation $C = 3x^2y$.

- [A] $y = C - 3x^2$ [B] $y = \frac{3x^2}{C}$
 [C] $y = \frac{C}{3x^2}$ [D] $y = 3x^2 - C$

[12] _____

13. Solve $3x - 5y = 8$, for y .

[13] _____

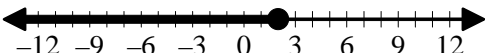
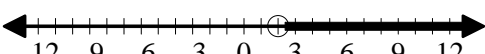
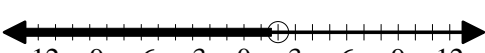
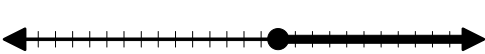
14. Solve the equation $C = 2x^2y$ for y .

- [A] $y = 2x^2 - C$ [B] $y = \frac{2x^2}{C}, C \neq 0$
 [C] $y = C - 2x^2$ [D] $y = \frac{C}{2x^2}, x \neq 0$

[14] _____

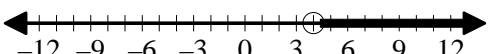
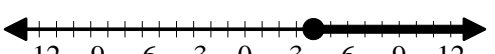
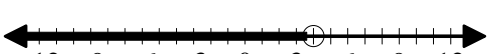
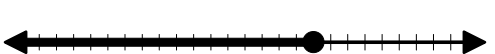
Graph:

15. $x + 3 \geq 5$

- [A] 
 [B] 
 [C] 
 [D] 

[15] _____

16. $x - 7 < -3$

- [A] 
 [B] 
 [C] 
 [D] 

[16] _____

17. $x + 9 > 5$

[17] _____

Solve:

18. $17 - x < 13$

- [A] $x < 4$ [B] $x < 30$
 [C] $x > 30$ [D] $x > 4$

[18] _____

19. $4 - x > 3$

- [A] $x < 7$ [B] $x > 7$
 [C] $x > 1$ [D] $x < 1$

[19] _____

20. $12 - x > 1$

[20] _____

21. Solve the inequality. $4x > 4$

[21] _____

22. Solve the inequality. $\frac{x}{6} < 6.1$

- [A] $x > 1.02$ [B] $x > 0.1$
 [C] $x < 36.6$ [D] $x > 12.1$

[22] _____

23. Solve the inequality. $\frac{x}{6} \geq 7.8$

- [A] $x \geq 46.8$ [B] $x \geq 13.8$
 [C] $x \leq 1.30$ [D] $x \leq 46.8$

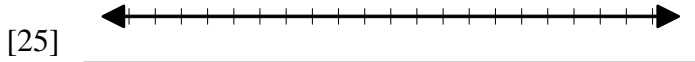
[23] _____

24. Solve: $x + 4 + (x - 2) > 0$

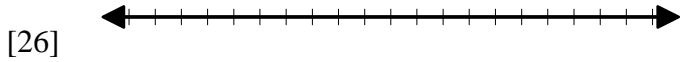
- [A] $x < 1$ [B] $x < -1$
 [C] $x > -7$ [D] $x > -1$

[24] _____

25. Solve and graph on the number line.
 $5(x+3) > 7x+25$

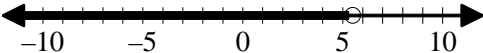
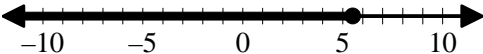
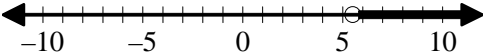
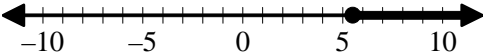


26. Solve and graph on the number line.
 $2(x+2) > 4x+20$



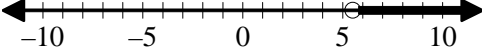
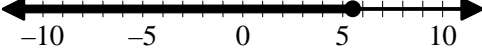
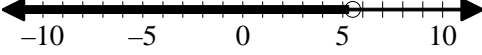
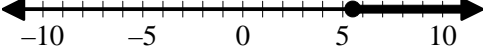
Graph:

27. $5x - 2 < 3(x + 3)$

- [A] 
 [B] 
 [C] 
 [D] 

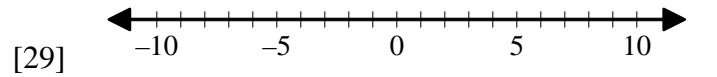
[27] _____

28. $4x - 5 > 2(x + 3)$

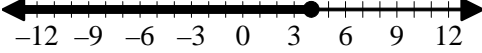
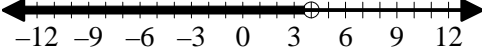
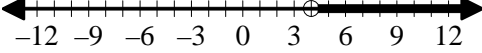
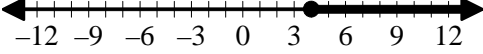
- [A] 
 [B] 
 [C] 
 [D] 

[28] _____

29. $5x - 4 > 3(x + 1)$



30. $\frac{2x-2}{3} < 2$

- [A] 
 [B] 
 [C] 
 [D] 

[30] _____