



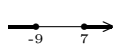


Review 1A

Math 105

Show all of your work.

1. Solve $x + 3 = 3x + 1$.
2. Solve $2 - (x - 1) = 2(5 - x) + 7$.
3. Solve $\frac{x - 2}{3} + \frac{1}{2} = x - \frac{3}{2}$
4. Solve $|x + 3| = 4$.
5. Solve $\left| \frac{2x + 1}{5} \right| = 3$.
6. Solve $|2x + 1| = |x - 3|$.
7. Solve $A = P + Prt$ for t .
8. If five times a certain number is equal to eight less than the number, what is the number? (Write an equation for the question and solve.)
9. Tom and Bob are both driving to Chicago. Tom gets on the highway five minutes before Bob. If Tom drives 60 mph and Bob drives 70 mph on the highway, how long will it take for Bob to pass Tom?
10. Graph the solution to the inequality $1 - (2x + 6) \leq 1 + x$.
11. Graph the solution to the inequality $\frac{2x}{5} - 3 \leq \frac{x + 2}{5}$.
12. Graph the solution to the inequality $-1 < 2 - x < 3$.
13. Graph the solution to the absolute value inequality $|x - 16| < 4$.
14. Graph the solution to the absolute value inequality $\left| \frac{x + 1}{2} \right| \geq 4$.
15. Simplify $\frac{x^0 x}{x^{-3}}$.
16. Simplify $(x^2 x^{-3})^{-2}$.
17. Simplify $\frac{y^3 y^4}{y^{-2}}$.
18. Simplify $(x^k)^2 x$.
19. Simplify $\frac{(x^2 y^{-4})^2 (x y^3)}{(x^{-2} y^{-1})(x^2 y)^{-1}}$.



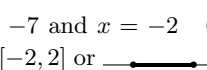
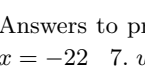
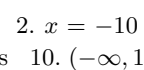
Answers to problems above: 1. $x = 1$ 2. $x = 14$ 3. $x = 2$ 4. $x = -7$ and $x = 1$ 5. $x = -8$ and $x = 7$ 6. $x = -4$ and $x = \frac{2}{3}$
 7. $t = \frac{A-P}{Pr}$ 8. -2 9. Bob passes Tom 30 minutes after getting on the highway. 10. $[-2, \infty)$ or  11. $(-\infty, 17]$ or 
 12. $(-1, 3)$ or  13. $(12, 20)$ or  14. $(\infty, -9] \cup [7, \infty)$ or  15. x^4 16. x^2 17. y^9 18. x^{2k+1} 19. $\frac{x^9}{y^3}$

Review 1B

Math 105

Show all of your work.

1. Solve $7x + 2 = 3x$.
2. Solve $2(x - 6) + 3 = 7 - 3(2 - x)$.
3. Solve $\frac{x}{2} + \frac{1}{3} = x - \frac{2}{3}$
4. Solve $|x - 2| = 12$.
5. Solve $|2x + 9| = 5$.
6. Solve $|x + 6| - 4 = 12$.
7. Solve $V = lwh$ for w .
8. If a number divided by five is ten less than twice the number, what is the number? (Write an equation for the question and solve.)
9. Jill can bike up to Lookout Ridge at an average rate of 5 mph and bike back at an average rate of 15 mph. How far is it to Lookout Ridge, if it takes her three hours to make a round trip?
10. Graph the solution to the inequality $14 > 2(x - 1) - (x + 1)$.
11. Graph the solution to the inequality $\frac{2x}{3} + 1 \geq \frac{x}{6} - 2$.
12. Graph the solution to the inequality $-3 \leq 1 - 2x \leq 5$.
13. Graph the solution to the absolute value inequality $|2x + 1| \leq 1$.
14. Graph the solution to the absolute value inequality $|x - 15| > 3$.
15. Simplify $x^4 \cdot x^0 \cdot x$.
16. Simplify $\left(\frac{x^{-3}}{x^2}\right)^2$.
17. Simplify $\left(\frac{x^3x}{x^2}\right)^{-3}$.
18. Simplify $\frac{(x^5)^k}{x}$.
19. Simplify $\frac{(x^3y^4)(x^2y)^3}{(x^2y^{-1})(x^4)^{-1}}$.

Answers to problems above: 1. $x = -\frac{1}{2}$ 2. $x = -10$ 3. $x = 2$ 4. $x = -10$ and $x = 14$ 5. $x = -7$ and $x = -2$ 6. $x = 10$ and $x = -22$ 7. $w = \frac{V}{lh}$ 8. $5\frac{5}{9}$ 9. 11.25 miles 10. $(-\infty, 17)$ or  11. $[-6, \infty)$ or  12. $[-2, 2]$ or  13. $[-1, 0]$ or  14. $(-\infty, 12) \cup (18, \infty)$ or  15. x^5 16. $\frac{1}{x^{10}}$ 17. $\frac{1}{x^6}$ 18. x^{5k-1} 19. $x^{11}y^8$