Unit 1 Test Review

Evaluate using order of operations.

1. $4 + 12(3) - 16 \div 2^2$
2. $8 \div 2(4 - 8)$

Simplify each expression.

3. $42x + 3p - 2x - p$
4. $36p - 4(3p + 2)$
5. $5 + (-12t) + 8t$
6. $3(x - 8)$
7. $-2(x + 7)$

Solve each equation. Remember to check your work.

8. $x - 2 = 15$
9. $\frac{y}{3} + 2 = -2$
10. $-p + 3 = 10$
11. $-3(h + 7) = -18$
12. $9x + 7 = 34$

Solve and graph. Remember to check your work.

13. $-9x \leq 81$
14. $\frac{3}{5} + c > \frac{1}{4}$
15. $\frac{w}{-6} \geq -5$
16. $-72 < 8p$
17. $-4x - 8 > 36$
18. $3(x + 8) < 9$
19. $-4(x - 2) > 10$
20. $14 < 2 - x$

21. You have \$90 to buy CDs for your friend's party. The CDs cost \$18 each. Write and solve an inequality to find the possible number of CDs that you can buy.
22. Sue has a gift card for her favorite store. She has already used \$14 of the total value, which was \$30. Write, solve, and graph and inequality to show how much more money she can spend.
23. A taxi services charges \$1.50 for each ride, plus an additional \$0.75 per mile. Ben spent \$12.75 on his cab fare to dinner. Write an equation to model the situation. Then solve to find how many miles Ben's cab ride was.

Review

1. $4 + 12(3) - 16 \div 2^2$

$4 + 12(3) - 16 \div 4$

$4 + 36 - 4$

$40 - 4$

36

2. $8 \div 2(4-8)$

$8 \div 2(-4)$

$4(-4)$

-16

3. $42x + 3p - 2x - p$

$42x - 2x + 3p - p$

$40x + 2p$

4. $36p - 4(3p + 2)$

$36p - 12p - 8$

$24p - 8$

5. $5 + (-12t) + 8t$

$5 - 4t$

6. $3(x - 8)$

$3x - 24$

7. $-2(x + 7)$

$-2x - 14$

8. $x - 2 = 15$

$+2 \quad +2$

$x = 17$

check

$17 - 2 = 15$

$15 = 15$ ✓

9. $\frac{y}{3} + 2 = -2$

$-2 \quad -2$

$\frac{y}{3} = -4$

$3 \cdot \frac{y}{3} = -4 \cdot 3$

$y = -12$

check

$\frac{-12}{3} + 2 = -2$

$-4 + 2 = -2$

$-2 = -2$ ✓

10. $-p+3=10$

$-3 \quad -3$

$-p=7$

$\frac{-p}{-1}=\frac{7}{-1}$

$p=-7$

check:

$-7+3=10$

$7+3=10$

$10=10$ ✓

11. $-3(h+7)=-18$

$-3h-21=-18$

$+21 \quad +21$

$-3h=3$

$\frac{-3h}{-3}=\frac{3}{-3}$

$h=-1$

Check

$-3(-1+7)=-18$

$-3(6)=-18$

$-18=-18$ ✓

12. $9x+7=34$

$-7 \quad -7$

$9x=27$

$\frac{9x}{9}=\frac{27}{9}$

$x=3$

check:

$9 \cdot 3+7=34$

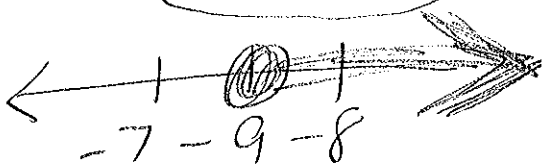
$27+7=34$

$34=34$ ✓

13. $-9x \leq 81$

$\frac{-9x}{-9} \leq \frac{81}{-9}$

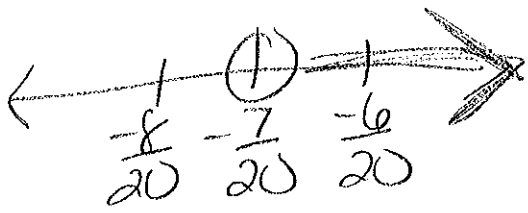
$x \geq -9$



14. $\frac{3}{5}+c>\frac{1}{4}\frac{5}{20}$

$-\frac{3}{5} \quad -\frac{3}{5}\frac{12}{20}$

$c>-\frac{7}{20}$



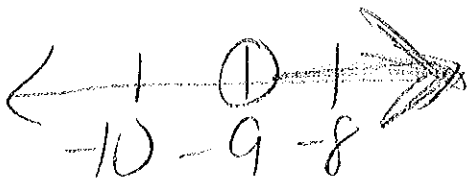
15. $\frac{w}{-6} \geq -5$

$w \leq 30$

16. $-72 < 8p$

$\frac{-72}{8} < \frac{8p}{8}$

$-9 < p$



17. $-4x - 8 > 36$

$+8 \quad +8$

$-4x > 44$

$\frac{-4x}{-4} > \frac{44}{-4}$

$x < -11$

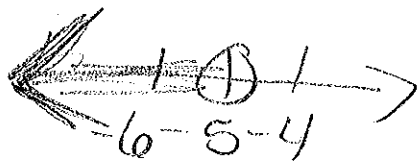
18. $3(x+8) < 9$

$3x + 24 < 9$

$-24 \quad -24$

$\frac{3x}{3} < \frac{-15}{3}$

$x < -5$



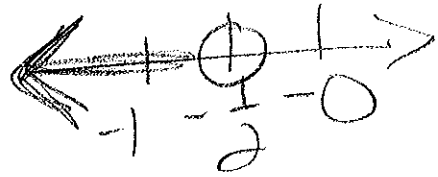
19. $-4(x-2) > 10$

$-4x + 8 > 10$

$-8 \quad -8$

$\frac{-4x}{-4} > \frac{2}{-4}$

$x < -\frac{1}{2}$

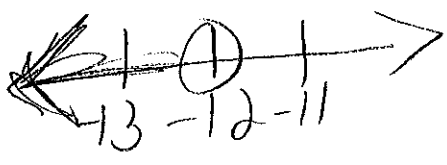


20. $14 < 2 - x$

$-2 \quad -2$

$\frac{12}{-1} < \frac{-x}{-1}$

$-12 > x$



21. $18x \leq 90$

$x \leq 5$

you can buy
0, 1, 2, 3, 4, or 5 CD's

22. $x + 14 \leq 30$

$-14 \quad -14$

$x \leq 16$

She can spend
between $0 and $16

23. $1.5 + .75x = 12.75$

$-1.5 \qquad -1.50$

$\frac{.75x}{.75} = \frac{11.25}{.75}$

$x = 15$ miles