1. $3y - 8 = 16$

$+8 \quad +8$

$3y = 24$

$\frac{3y}{3} = \frac{24}{3}$

$y = 8$

2. $\frac{x}{3} + 12 = -4$

$-12 \quad -12$

$\frac{x}{3} = -16$

$(3)\frac{x}{3} = (3) - 16$

$x = -48$

3. $\frac{a}{6} - 7 = -4$

$+7 \quad +7$

$\frac{a}{6} = 3$

$(6)\frac{a}{6} = (6)3$

$a = 18$

4. $-7b + 5 = -51$

$-5 \quad -5$

$-7b = -56$

$\frac{-7b}{-7} = \frac{-56}{-7}$

$b = 8$

5. $\frac{5y - 4}{3} = 7$

$(3)\frac{5y - 4}{3} = (3)7$

$5y - 4 = 21$

$+4 \quad +4$

$5y = 25$

$\frac{5y}{5} = \frac{25}{5}$

$y = 5$

6. $8r + 7 - 13 = 58$

$8r - 6 = 58$

$+6 \quad +6$

$8r = 64$

$\frac{8r}{8} = \frac{64}{8}$

$r = 8$

7. $6 = \frac{12s - 6}{5}$

$(5)6 = (5)\frac{12s - 6}{5}$

$30 = 12s - 6$

$+6 \qquad +6$

$36 = 12s$

$\frac{36}{12} = \frac{12s}{12}$

$3 = s$

8. $8.7 = \frac{19.8 - 4t}{3}$

$(3)8.7 = (3)\frac{19.8 - 4t}{3}$

$26.1 = 19.8 - 4t$

$-19.8 \qquad -19.8$

$6.3 = -4t$

$\frac{6.3}{-4} = \frac{-4t}{-4}$

$-1.575 = t$

9. $-14q = 4q - 126$

$-4q \qquad -4q$

$-18q = -126$

$\frac{-18q}{-18} = \frac{-126}{-18}$

$q = 7$

10. $\frac{5}{6}p + 4 = \frac{1}{6}p - 16$

$-\frac{1}{6}p \qquad -\frac{1}{6}p$

$\frac{2}{3}p + 4 = -16$

$-4 \qquad -4$

$\frac{2}{3}p = -20$

$\left(\frac{3}{2}\right)\frac{2}{3}p = \left(\frac{3}{2}\right) - 20$

$p = -30$

11. $9 - 6k = 3k - 54$

$+6k \qquad +6k$

$9 = 9k - 54$

$+54 \qquad +54$

$63 = 9k$

$\frac{63}{9} = \frac{9k}{9}$

$7 = k$

12. $-3.6d = -7d + 34$

$+7d \quad +7d$

$3.4d = 34$

$\frac{3.4d}{3.4} = \frac{34}{3.4}$

$d = 10$

13. Let x represent the number of hours.

$44 + 45x = 179$

$-44 \quad -44$

$45x = 135$

$\frac{45x}{45} = \frac{135}{45}$

$x = 3$

It took 3 hours to repair the computer.

14. Let x represent how many dozen they need to sell.

$15.75 + 2.25x = 4.50x$

$-2.25x \quad -2.25x$

$15.75 = 2.25x$

$\frac{15.75}{2.25} = \frac{2.25x}{2.25}$

$7 = x$

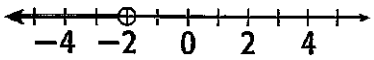
They need to sell 7 dozen to cover their cost.

15. Height > 4 ft

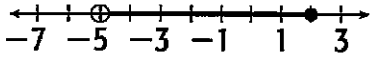
16. Speed ≤ 65 mi/h

17. $a < -2$

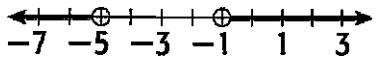
-2 is not a solution, so draw an open circle at -2. Shade the line to the left of -2.



18. The solutions $-5 < d \leq 2$ are the solutions common to $-5 < d$ and $d \leq 2$.

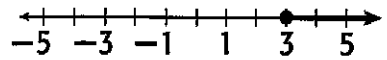


19. The solutions of $c > -1$ or $c < -5$ are the combined solutions of $c > -1$ and $c < -5$.



20. $b \geq 3$

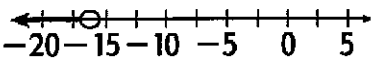
3 is a solution, so draw a closed circle on 3. Shade the line to the right of 3.



21. $n + 8 < -9$

$-8 \quad -8$

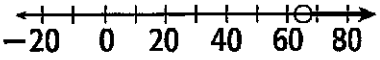
$n < -17$



22. $n - 124 > -59$

$+124 \quad +124$

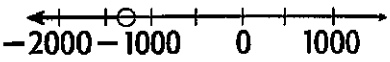
$n > 65$



23. $-40 > \frac{x}{32}$

$(32) - 40 > (32)\frac{x}{32}$

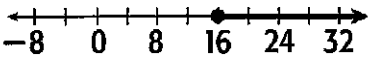
$-1{,}280 > x$



24. $-\frac{3}{4}y \leq -12$

$\left(-\frac{4}{3}\right)-\frac{3}{4}y \geq \left(-\frac{4}{3}\right)-12$

$y \geq 16$



25. Let x represent the amount she needs to save.

$46 + x \geq 125$

$-46 \quad -46$

$x \geq 79$

Rosa needs to save at least $79.

26. Let x represent the number of gallons.

$2.75x \leq 22.00$

$\frac{2.75x}{2.75} \leq \frac{22.00}{2.75}$

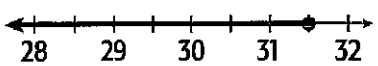
$x \leq 8$

At most 8 gallons can be bought.

27. $m - 7.8 \leq 23.7$

$+7.8 \quad +7.8$

$m \leq 31.5$

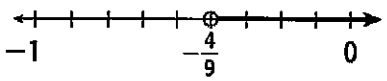


28. $6z > -2\frac{2}{3}$

$6z > -\frac{8}{3}$

$\left(\frac{1}{6}\right)6z > \left(\frac{1}{6}\right)-\frac{8}{3}$

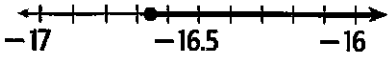
$z > -\frac{4}{9}$



29. $\frac{w}{-4.9} \leq 3.4$

$(-4.9)\frac{w}{-4.9} \geq (-4.9)3.4$

$w \geq -16.66$



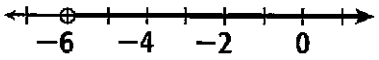
30. $-15 < 4a + 9$

$\underline{-9 \quad -9}$

$-24 < 4a$

$\frac{-24}{4} < \frac{4a}{4}$

$-6 < a$



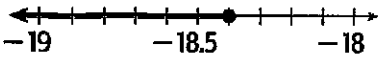
31. $2.8 - \frac{c}{4} \geq 7.4$

$\underline{-2.8 \quad -2.8}$

$-\frac{c}{4} \geq 4.6$

$(-4) - \frac{c}{4} \leq (-4)4.6$

$c \leq -18.4$



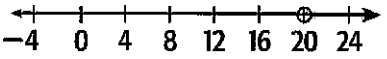
32. $\frac{d}{5} - 8 > -4$

$\underline{+8 \quad +8}$

$\frac{d}{5} > 4$

$(5)\frac{d}{5} > (5)4$

$d > 20$



33. Let x represent how much money they must collect.

$$\begin{aligned} 198(20) + 198x &\geq 7500 \\ 3960 + 198x &\geq 7500 \\ -3960 \qquad\quad &\quad -3960 \\ \hline 198x &\geq 3540 \\ \frac{198x}{198} &\geq \frac{3540}{198} \\ x &\geq 17.87 \end{aligned}$$

Each student must raise at least \$18.