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# Supplemental Unit (part 2) Bringing It All Together #1

## Multi-Step Equations and Inequalities

**Simplify each expression. (Use the Distributive Property and collect like terms.)**

1) $5(8g + 10)$

2) $-3(7m + 4)$

3) $9(10f - 7)$

4) $-(7a - 1)$

5) $-4(-3k + 6) + (-12)$

6) $6(4n - 2) - 5$

7) $6c + 3(2c - 4) + 8$

8) $2(-2p + 1) - 5p - 4$

9) $5 + 3(-3 - 4y) - 7y + 4$

10) $-8(-7w - 2) + 6(5 + w)$

**Solve each equation. Show your work ☺ Check your solution if necessary.**

11) $6k + 14 = 4k - 4$

12) $-14 = -3(2p + 4)$

13) $5y - 1 = 3(y + 2) + 3$

14) $1 + 5(b + 3) = 8(b + 2)$

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**Solve each equation. Show your work ☺ Check your solution if necessary.**

15) $6f - 4 = 2(f + 8)$

16) $6 - 2c + 3 = 7 + c$

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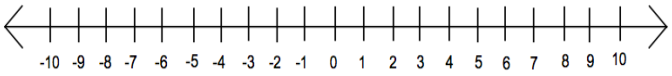
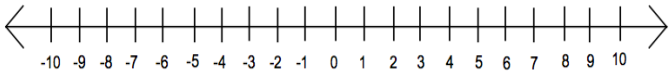
**Solve. Show your work ☺ Check your solution if necessary.**
**Then, graph the solution on a number line.**

17) $6w - 2 \geq -20$

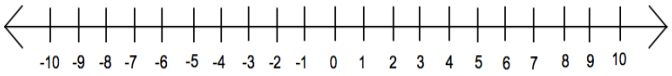
18) $3 - 3k \leq -12$

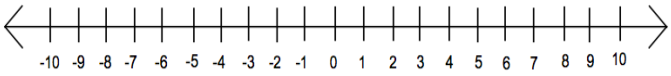



19) $\frac{m}{2} - 6 < -5$

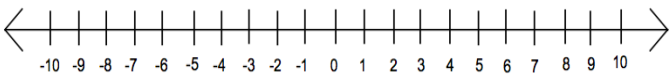
20) $4h - 4 \leq 1 - h$

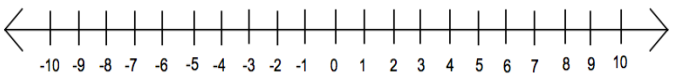



21) $-3(n + 2) > -18$

22) $\frac{1}{3}(12 + 6b) > 8$

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# Supplemental Unit (part 2) BIT #1 Answer Key

## Multi-Step Equations and Inequalities

**Simplify each expression. (Use the Distributive Property and collect like terms.)**

1) $5(8g + 10)$

$40g + 50$

2) $-3(7m + 4)$

$-21m - 12$

3) $9(10f - 7)$

$90f - 63$

4) $-(7a - 1)$

$-7a + 1$

5) $-4(-3k + 6) + (-12)$

$12k - 24 + (-12)$

$12k - 36$

6) $6(4n - 2) - 5$

$24n - 12 - 5$

$24n - 17$

7) $6c + 3(2c - 4) + 8$

$6c + 6c - 12 + 8$

$12c - 4$

8) $2(-2p + 1) - 5p - 4$

$-4p + 2 - 5p - 4$

$-9p - 2$

9) $5 + 3(-3 - 4y) - 7y + 4$

$5 - 9 - 12y - 7y + 4$

$-19y$

10) $-8(-7w - 2) + 6(5 + w)$

$56w + 16 + 30 + 6w$

$62w + 46$

**Solve each equation. Show your work ☺ Check your solution if necessary.**

11) $6k + 14 = 4k - 4$

$-4k \quad -4k$

$2k + 14 = -4$

$-14 \quad -14$

$\frac{2k}{2} = \frac{-18}{2}$

$k = -9$

12) $-14 = -3(2p + 4)$

$-14 = -6p - 12$

$+12 \quad +12$

$\frac{-2}{-6} = \frac{-6p}{-6}$

$\frac{1}{3} = p$

13) $5y - 1 = 3(y + 2) + 3$

$5y - 1 = 3y + 6 + 3$

$5y - 1 = 3y + 9$

$-3y \quad -3y$

$2y - 1 = 9$

$+1 \quad +1$

$\frac{2y}{2} = \frac{10}{2}$

$y = 5$

14) $1 + 5(b + 3) = 8(b + 2)$

$1 + 5b + 15 = 8b + 16$

$5b + 16 = 8b + 16$

$-5b \quad -5b$

$16 = 3b + 16$

$-16 \quad -16$

$\frac{0}{3} = \frac{3b}{3}$

$0 = b$

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**Solve each equation. Show your work ☺ Check your solution if necessary.**

15) $6f - 4 = 2(f + 8)$

$6f - 4 = 2f + 16$

$-2f \quad -2f$

$4f - 4 = 16$

$+4 \quad +4$

$\frac{4f}{4} = \frac{20}{4}$

$f = 5$

16) $6 - 2c + 3 = 7 + c$

$-c \quad -c$

$-3c + 9 = 7$

$-9 \quad -9$

$\frac{-3c}{-3} = \frac{-2}{-3}$

$c = \frac{2}{3}$

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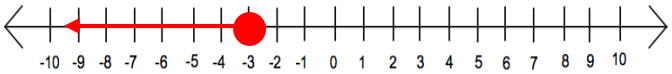
**Solve. Show your work ☺ Check your solution if necessary.**
**Then, graph the solution on a number line.**

17) $6w - 2 \geq -20$

$+2 \quad +2$

$\frac{6w}{6} \geq \frac{-18}{6}$

$w \leq -3$

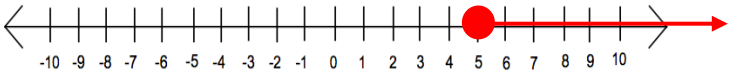



18) $3 - 3k \leq -12$

$-3 \quad -3$

$\frac{-3k}{-3} \leq \frac{-15}{-3}$

$k \geq 5$

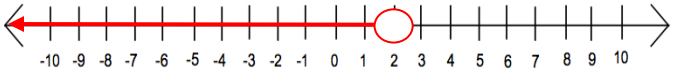



19) $\frac{m}{2} - 6 < -5$

$+6 \quad +6$

$(2)\frac{m}{2} < 1(2)$

$m < 2$




20) $4h - 4 \leq 1 - h$

$+h \quad +h$

$5h - 4 \leq 1$

$+4 \quad +4$

$\frac{5h}{5} \leq \frac{5}{5}$

$h \leq 1$

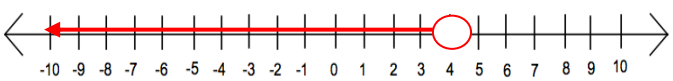

21) $-3(n + 2) > -18$

$-3n - 6 > -18$

$+6 \quad +6$

$\frac{-3n}{-3} > \frac{-12}{-3}$

$n < 4$



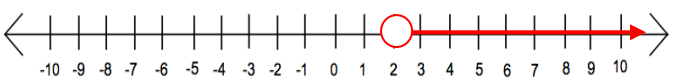

22) $\frac{1}{3}(12 + 6b) > 8$

$4 + 2b > 8$

$-4 \quad -4$

$\frac{2b}{2} > \frac{4}{2}$

$b > 2$

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