NAME ANSWER KEY DATE 1/25 PERIOD Adv.

Solving Inequalities

Solve each inequality. SHOW ALL STEPS used to solve. Circle/box your final answer.

1. $14g > 56$

$\frac{14g}{14} > \frac{56}{14}$

$\boxed{g > 4}$

2. $20b \geq -120$

$\frac{20b}{20} \geq \frac{-120}{20}$

$\boxed{b \geq -6}$

3. $-8r < 16$

$\frac{-8r}{-8} > \frac{16}{-8}$

$\boxed{r > -2}$

4. $-15p \leq -90$

$\frac{-15p}{-15} \geq \frac{-90}{-15}$

$\boxed{p \geq 6}$

5. $\frac{x}{4} < 9$

$4 \cdot \frac{x}{4} < 9 \cdot 4$

$\boxed{x < 36}$

6. $\frac{\alpha}{9} \geq -15$

$9 \cdot \frac{\alpha}{9} \geq -15 \cdot 9$

$\boxed{\alpha \geq -135}$

7. $-\frac{p}{7} > 9$

$-7 \cdot -\frac{p}{7} < 9 \cdot -7$

$\boxed{p < -63}$

8. $-\frac{t}{12} \geq -90$

$-12 \cdot -\frac{t}{12} \leq -90 \cdot -12$

$\boxed{t \leq 1080}$

9. $-y < 36$

$\frac{-y}{-1} > \frac{36}{-1}$

$\boxed{y > -36}$

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$-1 \cdot -y < 36 \cdot -1$

10. $-2b + 4 > -6$

$-4 \quad -4$

$\frac{-2b}{-2} < \frac{-10}{-2}$

$\boxed{b < 5}$

11. $3x + 15 \leq 21$

$-15 \quad -15$

$\frac{3x}{3} \leq \frac{6}{3}$

$\boxed{x \leq 2}$

12. $\frac{d}{2} - 1 \geq 3$

$+1 \quad +1$

$2 \cdot \frac{d}{2} \geq 4 \cdot 2$

$\boxed{d \geq 8}$

13. $\frac{5}{5}a - 4 < 2$

$+4 \quad +4$

$\frac{5}{5}a < 6$

$\boxed{a < 6}$

14. $-\frac{t}{5} + 7 > -4$

$-7 \quad -7$

$-5 \cdot -\frac{t}{5} < -11 \cdot -5$

$\boxed{t < 55}$

15. $\frac{3}{4}j - 10 \geq 5$

$+10 \quad +10$

$\frac{4}{3} \cdot \frac{3}{4}j \geq 15 \cdot \frac{4}{3}$

$\boxed{j \geq 20}$

16. $-\frac{2}{3}f + 3 < -9$

$-3 \quad -3$

$-\frac{2}{3}f < -12$

$\frac{-\frac{2}{3}f}{-\frac{2}{3}} > \frac{-12}{-\frac{2}{3}}$

$\boxed{f > 18}$

17. $2p + 5 \geq 3p - 10$

$-2p \quad -2p$

$5 \geq p - 10$

$+10 \quad +10$

$\boxed{15 \geq p}$

18. $2(-3m - 5) \geq -28$

$-6m - 10 \geq -28$

$+10 \quad +10$

$\frac{-6m}{-6} \leq \frac{-18}{-6}$

$\boxed{m \leq 3}$

19. $2(q - 3) + 6 \leq -10$

$2q - 6 + 6 \leq -10$

$\frac{2q}{2} \leq \frac{-10}{2}$

$\boxed{q \leq -5}$