**Solving Inequalities**

Solve each inequality. Then graph the solution set on a

number line

10. n + 4 ≥ -7

*SOLUTION:*

n + 4 ≥ -7

n + 4 – 4 ≥ -7 – 4

n ≥ -11

*ANSWER*:

n ≥ -11



11. b – 3 ≤ 15

*SOLUTION:*

b – 3 ≤ 15

b – 3 + 3 ≤ 15 + 3

b ≤ 12

*ANSWER*:

b ≤ 12



12. 5x < 35

*SOLUTION:*

5x < 35

<

x < 7

*ANSWER*:

x < 7



13. > -4

*SOLUTION:*

> -4

\* 2 > -4 \* 2

d > -8

*ANSWER*:

d > -8



14. ≥ -9

*SOLUTION:*

≥ -9

\* -3 ≥ -9 \* -3

g ≤ 27

*ANSWER*:

g ≤ 27



15. -8p ≥ 24

*SOLUTION:*

-8p ≥ 24

≥

p ≤ -3

*ANSWER*:

p ≤ -3



16. 13 – 4k ≤ 27

*SOLUTION:*

13 – 4k ≤ 27

13 – 13 – 4k ≤ 27 – 13

-4k ≤ 14

≤

k ≥ -3.5, -3

*ANSWER*:

k ≥ -3.5, -3



17. 14 > 7y – 21

*SOLUTION:*

14 > 7y – 21

35 > 7y

>

5 > y

*ANSWER*:

5 > y



18. -27 < 8m + 5

*SOLUTION:*

-27 < 8m + 5

-27 – 5 < 8m + 5 – 5

-32 < 8m

<

-4 < m

*ANSWER*:

-4 < m



19. 6b + 11 ≥ 15

*SOLUTION:*

6b + 11 ≥ 15

6b + 11 – 11 ≥ 15 – 11

6b ≥ 4

≥

b ≥

*ANSWER*:

b ≥



20. 2(4t + 9) ≤ 18

*SOLUTION:*

2(4t + 9) ≤ 18

≤

4t + 9 ≤ 9

4t + 9 - 9 ≤ 9 – 9

4t ≤ 0

t ≤ 0

*ANSWER*:

t ≤ 0



21. 90 ≥ 5(2r+ 6)

*SOLUTION:*

90 ≥ 5(2r+ 6)

≥

18 ≥ 2r + 6

18 - 6 ≥ 2r + 6 – 6

12 ≥ 2r

≥

6 ≥ r

*ANSWER*:

6 ≥ r



22. < 3t + 6

*SOLUTION:*

< 3t + 6

2 \* < 2 \* (3t + 6)

3t + 6 < 6t + 12

3t – 3t + 6 < 6t – 3t + 12

6 < 3t + 12

6 – 12 < 3t + 12 – 12

-6 < 3t

<

2 < t

*ANSWER*:

2 < t



23. – 1 < 0

*SOLUTION:*

– 1 < 0

– 1 + 1 < 0 + 1

< 1

\* 3 < 1 \* 3

k + 7 < 3

k + 7 – 7 < 3 – 7

k < -4

*ANSWER*:

k < -4



24. + 1 > 0

*SOLUTION:*

+ 1 > 0

+ 1 – 1 > 0 – 1

> -1

\* 5 > -1 \* 5

2n - 6 > -5

2n - 6 + 6 > -5 + 6

>

n >

*ANSWER*:

n >

