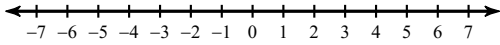


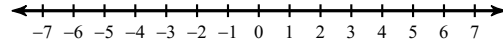
Unit 3 Study Guide

Write the inequality IN WORDS, give 2 possible solutions, and draw a graph for each inequality.

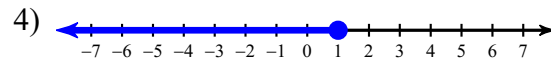
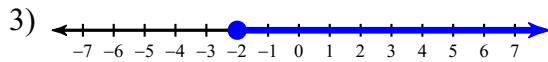
1) $4 < p$



2) $1 \leq p$



Write an inequality for each graph.



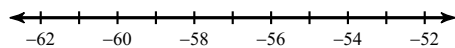
Write an inequality that represents the scenario.

5) You must be at least 25 years old to rent a car.

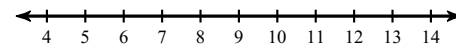
6) You must be less than 6.5 ft to ride the roller coaster.

Solve each inequality and graph its solution.

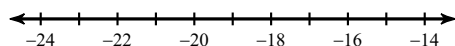
7) $-12 \geq \frac{v}{5}$



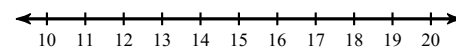
8) $13 + n \leq 23$



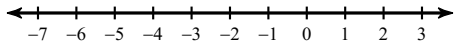
9) $\frac{m}{20} \leq -\frac{17}{20}$



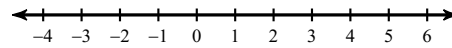
10) $-84 < -6v$



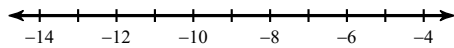
$$11) n - \frac{1}{4} \geq -\frac{17}{4}$$



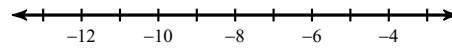
$$12) 7.3 < 7.5 + x$$



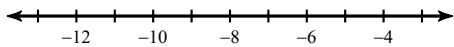
$$13) -4(1 + 7p) > 164$$



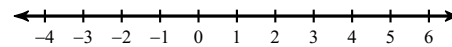
$$14) -7(5 - n) - 4 \geq -81$$



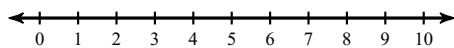
$$15) -3a + 7(3 - 3a) \leq 165$$



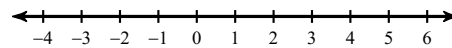
$$16) 38 - 8x \geq 6 - 4(2x - 8)$$



$$17) -34 + 2x < -7x + 8(2 - 2x)$$

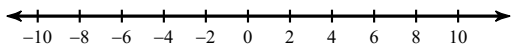


$$18) -2(2n + 6) \geq -4n - 10$$

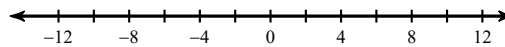


Solve each compound inequality and graph its solution.

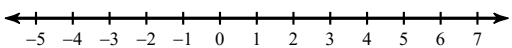
19) $7v + 8 < -27$ or $8v + 10 \geq 58$



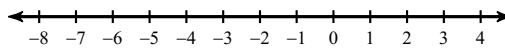
20) $2p + 3 \geq 17$ or $-3 - 8p > 61$



21) $-6 \leq 7v + 1 < 36$



22) $-28 \leq 8a + 4 \leq 20$



23) Jill needs to drive within 5 miles per hour of the speed limit to avoid a ticket. If the speed limit is 45 mph, WRITE and GRAPH a compound inequality to represent how fast she could drive.

Write and solve an inequality for the following scenarios. Write your final answer in WORDS.

24) Students need at least 75 hours of community service for graduation. Shawn has completed 48 hours already. How many more hours does he need to complete?

25) Marco needs to buy premium gas for his car, which is \$2.25 a gallon. He has \$20 in his wallet. How many gallons of gas can he get?

Inequality: _____

Inequality: _____

Answer: _____

Answer: _____

- 26) Dan needs to rent a moving van for the day. Company A charges \$75 plus \$0.25 per mile driven. Company B charges \$50 plus \$0.75 per mile driven. How many miles would he have to drive for Company B to be LESS than Company A?

Inequality: _____

Answer: _____

- 27) The science club wants to go to the Science Center, which has an admission price of \$8 per person. There is currently \$95 in their club fund, but they plan to raise another \$150.

a.) Write a compound inequality that represents how many students could go (x = number of students)

b.) Solve the inequality and give a REASONABLE answer in words for how many students could go

c.) If they club wanted to bring 32 students and 2 adults, how much total money would they need?

Solve each equation.

28) $|5n| - 1 = 29$

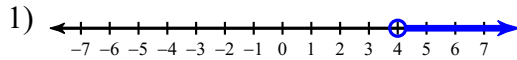
29) $10|2 - 3b| = 100$

Solve each inequality.

30) $|6 + k| + 1 \leq 12$

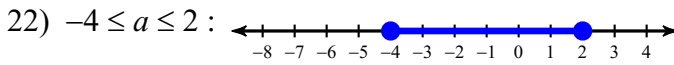
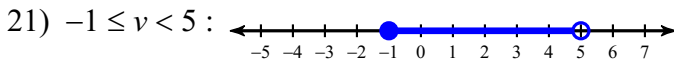
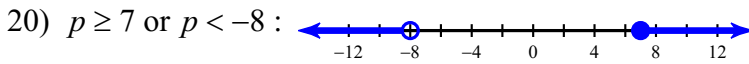
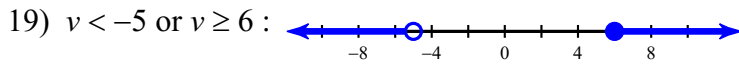
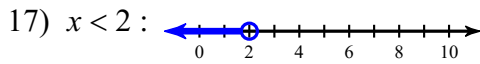
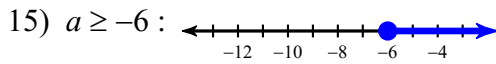
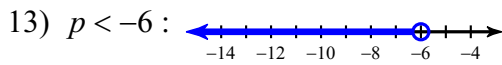
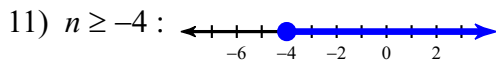
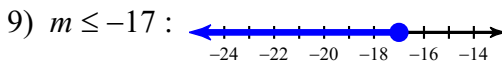
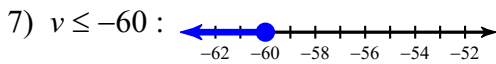
31) $8|b + 2| + 2 \geq 58$

Answers to Unit 3 Study Guide



3) $r \geq -2$

4) $n \leq 1$



23)

24)

25)

26)

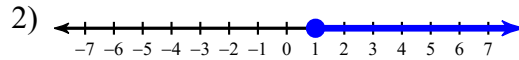
27)

28) $\{6, -6\}$

29) $\left\{-\frac{8}{3}, 4\right\}$

30) $-17 \leq k \leq 5$

31) $b \geq 5$ or $b \leq -9$



5)

6)

