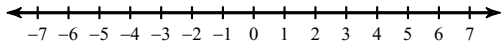


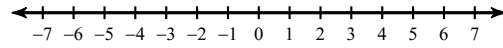
## Unit 3 Test - Practice Problems

**Draw a graph for each inequality.**

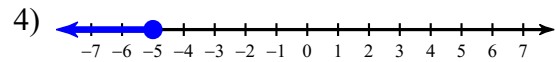
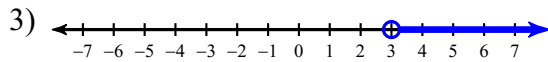
1)  $x < -1$



2)  $4 < b$

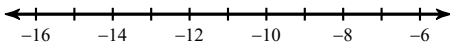


**Write an inequality for each graph.**

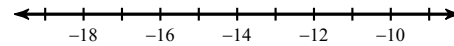


**Solve each inequality and graph its solution.**

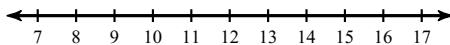
5)  $-24 \leq m - 10$



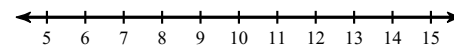
6)  $260 \geq -20p$



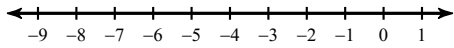
7)  $96 \geq 8(1 + a)$



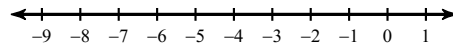
8)  $\frac{n-2}{2} \leq 5$



$$9) 5(p - 2) \leq -18 + 5p$$



$$10) -8(7p + 5) \geq 17 + p$$



**A freight elevator can hold a maximum weight of 3,500 pounds.**

11) Let  $w$  be the weight allowed on the elevator. Write the inequality that represents this situation.

Inequality \_\_\_\_\_

12) A deliveryman weighs 200 pounds. He is delivering cartons that each weigh 48 pounds. He wants to know how many cartons he can safely put on the elevator at one time. Let  $c$  represent the number of cartons. (The 3,500 pound weight limit still applies to this part of the problem!)

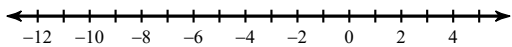
Write an inequality that represents this situation.

Inequality \_\_\_\_\_

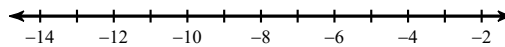
13) Solve your inequality from question 12 above. Show your work fully. Explain what your solution means.

Solve each compound inequality and graph its solution.

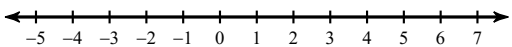
14)  $b + 3 < -5$  or  $b + 10 \geq 10$



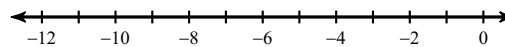
15)  $-12 \leq b - 5 < -8$



16)  $-2 < 3p + 4 < 19$



17)  $4x - 2 < -26$  or  $2 - 5x < 22$



Solve each equation.

18)  $|v - 2| = 9$

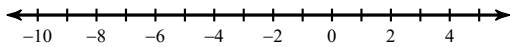
19)  $9|x| = 45$

$$20) \left| \frac{m}{3} \right| + 6 = 7$$

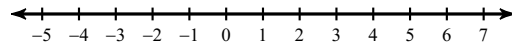
$$21) 8 + |b - 2| = 10$$

**Solve each inequality and graph its solution.**

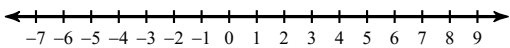
$$22) |x + 3| \geq 4$$



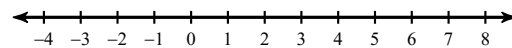
$$23) |v| - 10 \leq -8$$



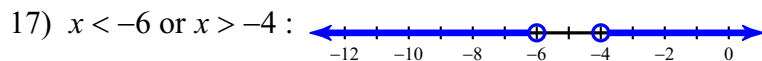
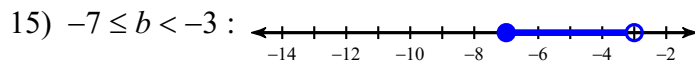
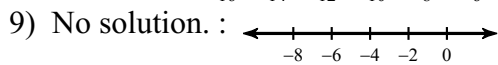
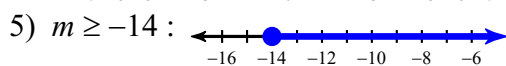
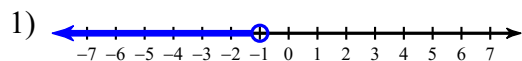
$$24) \left| \frac{p}{6} \right| - 2 < -1$$



$$25) |-4 + 4a| + 5 > 13$$

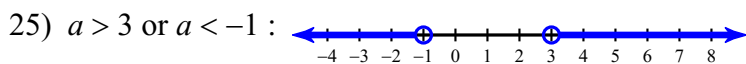
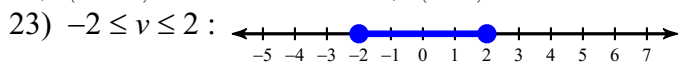


## Answers to Unit 3 Test - Practice Problems

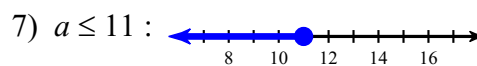


19)  $\{5, -5\}$

21)  $\{4, 0\}$



3)  $r > 3$



11)

13)