

Alg 1 Topic 1.2 to 1.6 Test Practice 2019-2020

What is the solution of the equation?

B 1. $16 = -d + 6$
a. 10

b.
$$\begin{array}{r} 16 = -d + 6 \\ -6 \quad -6 \\ \hline 10 = -d \\ -1 \quad -1 \\ \hline -10 = d \end{array}$$

c. -9 d. -15

A 2. $\frac{b+6}{5} = 10$
a. 44

b. -4 c. 56 d. 8

$$\begin{array}{l} 5 \cdot \left(\frac{b+6}{5}\right) = (10) \cdot 5 \\ \hline b+6 = 50 \\ -6 \quad -6 \\ \hline b = 44 \end{array}$$

D 3. $3(y-5) + 2 = 5$
a. 4

b. 7 c. -4 d. 6

$$\begin{array}{r} 3y - 15 + 2 = 5 \\ \hline 3y - 13 = 5 \\ +13 \quad +13 \\ \hline 3y = 18 \\ \hline y = 6 \end{array}$$

D 4. $\frac{3p}{5} + \frac{8}{5} = 1$
a. 15

b. 2 c. -10 d. -1

$$\begin{array}{r} 3p - 8 = -3 \\ \hline 3p = 5 \\ \hline p = \frac{5}{3} \end{array}$$

B 5. $6x - 3 = 5x - 5$
a. -4

b. -2 c. 0 d. -1

$$\begin{array}{r} 6x - 3 = 5x - 5 \\ -5x \quad -5x \\ \hline x - 3 = -5 \\ +3 \quad +3 \\ \hline x = -2 \end{array}$$

D 6. $-4x - 9 = -5 - 6x$
a. 4

b. 1 c. -1 d. 2

$$\begin{array}{r} -4x - 9 = -5 - 6x \\ +6x \quad +6x \\ \hline 2x - 9 = -5 \\ +9 \quad +9 \\ \hline 2x = 4 \\ \hline x = 2 \end{array}$$

What is the solution of each equation?

C 7. $2(h-8) - h = h - 16$
a. 8
b. -8

c. infinitely many solutions
d. no solution

$$\begin{array}{r} 2h - 16 - h = h - 16 \\ \hline h - 16 = h - 16 \\ -h \quad -h \\ \hline -16 = -16 \end{array}$$

C 8. $2 + 3z = 5 + 3z$
a. $-\frac{1}{2}$

b. infinitely many solutions c. no solution d. $2\frac{1}{3}$

$$\begin{array}{r} 2 + 3z = 5 + 3z \\ -3z \quad -3z \\ \hline 2 = 5 \end{array}$$

False → no solution

A 9. What equation do you get when you solve $ky - bf = \frac{fy}{m}$ for y ?

★ ★
a. $y = \frac{bfm}{km-f}$
b. $y = \frac{m(ky-bf)}{f}$

c. $y = -\frac{bfm}{km-f}$
d. $y = -\frac{m(ky-bf)}{f}$

$$\begin{array}{l} ky - bf = \frac{fy}{m} \\ m(ky - bf) = m\left(\frac{fy}{m}\right) \\ mky - mbf = fy \\ -fy \quad -fy \\ \hline mky - mbf - fy = -fy \\ \hline mky - mbf = -fy \\ +mbf \quad +mbf \\ \hline mky - fy = -mbf \\ -fy \quad -fy \\ \hline mky - 2fy = -mbf \\ \hline y(mk - 2f) = -mbf \\ \hline y = \frac{-mbf}{mk - 2f} \end{array}$$

C 10. What equation do you get when you solve $z - m = z + bx$ for x ?

a. $x = \frac{2z + m}{b}$

b. $x = \frac{b}{m}$

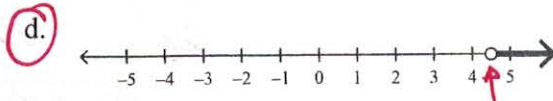
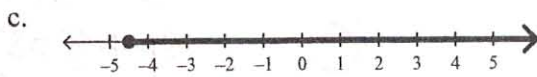
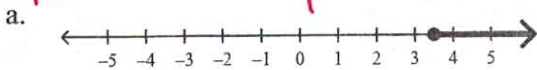
c. $x = \frac{-m}{b}$

d. $x = \frac{2z - m}{b}$

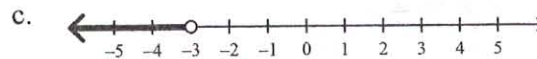
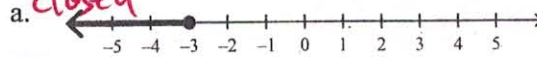
$$\begin{array}{r} z - m = z + bx \\ \underline{-z} \quad \quad \underline{-z} \\ -m \quad \quad \quad bx \\ \hline \frac{-m}{b} = \frac{bx}{b} \\ \frac{-m}{b} = x \end{array}$$

What is the graph of the inequality?

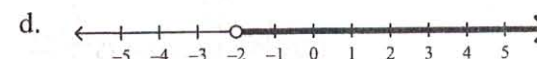
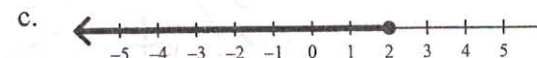
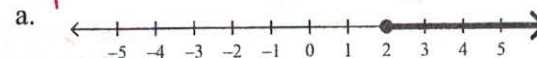
D 11. $k > \frac{9}{2}$ *open* $\rightarrow 2 \overline{) 9} \rightarrow 4 \frac{1}{2}$



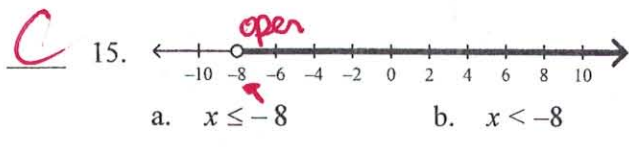
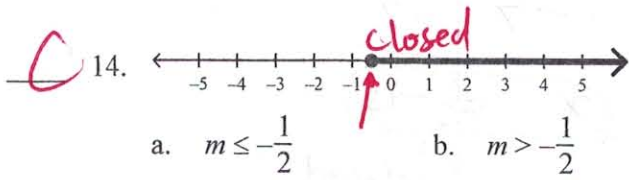
B 12. $x \geq -3$ *closed*



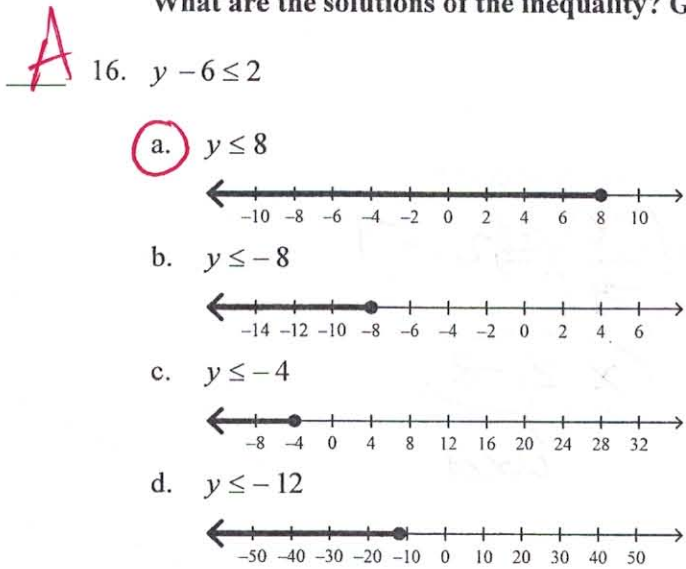
B 13. $d < 2$ *open*



What inequality represents the graph?

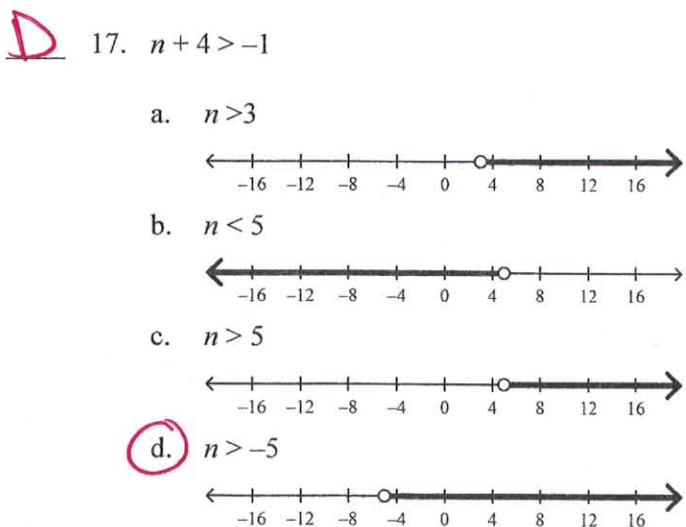


What are the solutions of the inequality? Graph the solutions.



$$\begin{array}{r|l} y - 6 \leq 2 & \\ +6 & +6 \\ \hline y \leq 8 & \end{array}$$

closed

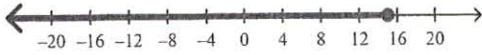


$$\begin{array}{r|l} n + 4 > -1 & \\ -4 & -4 \\ \hline n > -5 & \end{array}$$

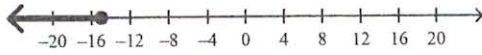
open

B 18. $x + 7 \leq -8$

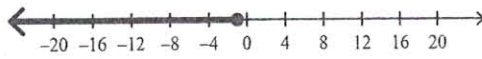
a. $x \leq 15$



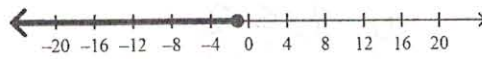
b. $x \leq -15$



c. $x \leq -1$



d. $x \leq -\frac{8}{7}$

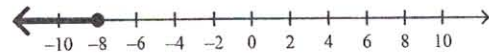


$$\begin{array}{r} x+7 \leq -8 \\ -7 \quad -7 \\ \hline x \leq -15 \\ \text{closed} \end{array}$$

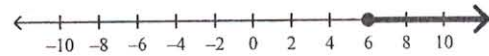
What are the solutions of the inequality? Graph and check the solutions.

D 19. $-\frac{x}{4} \leq 2$

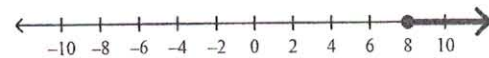
a. $x \leq -8$



b. $x \leq 6$



c. $x \geq 8$



d. $x \geq -8$

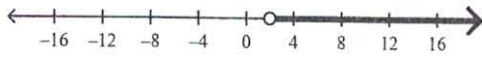


$$\begin{array}{r} -4 \cdot \left(\frac{x}{-4} \right) \leq 2 \cdot -4 \\ x \geq -8 \\ \text{closed} \end{array}$$

What are the solutions of the inequality? Graph the solutions.

A 20. $-12r < -24$

- a. $r > 2$



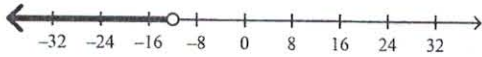
- b. $r < 2$



- c. $r > -12$



- d. $r < -12$



$$\frac{-12r < -24}{-12 \quad -12}$$

$r > 2$
open

What are the solutions of the inequality?

C 21. $-2(3x+2) \geq -6x-4$

- a. $x \geq 0$
b. $x \leq 6$

$$\begin{array}{r} -6x-4 \geq -6x-4 \\ +6x \quad +6x \\ \hline -4 \geq -4 \end{array}$$

True
no solutions/all real #s

- c. all real numbers
d. no solution

D 22. $10x-10-7x \geq 3x-2$

- a. $x \geq -8$
b. $x \leq 8$

- c. all real numbers
d. no solution

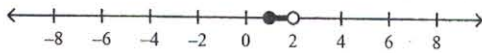
$$\begin{array}{r} 10x-10-7x \geq 3x-2 \\ 3x-10 \geq 3x-2 \\ -3x \quad -3x \\ \hline -10 \geq -2 \end{array}$$

False
no solution

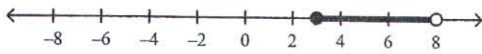
What are the solutions of the compound inequality? Graph the solutions.

C 23. $-2 \leq 2x-4 < 8$

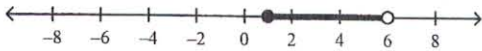
- a. $1 \leq x < 2$



- b. $3 \leq x < 8$



- C** c. $1 \leq x < 6$



- d. $0 \leq x < 2$



$$\begin{array}{r} -2 \leq 2x-4 < 8 \\ +4 \quad +4 \quad +4 \\ \hline 2 \leq 2x < 12 \\ \frac{2}{2} \quad \frac{2x}{2} \quad \frac{12}{2} \\ \hline 1 \leq x < 6 \end{array}$$

What compound inequality represents the phrase? Graph the solutions.

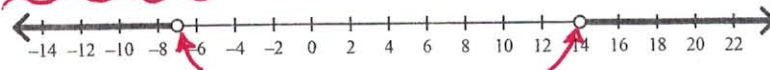
24. all real numbers w that are less than -7 or greater than 14
- a. $-7 < w < 14$
- $w < -7$ $w > 14$
open open



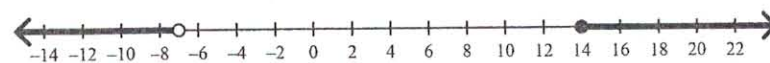
- b. $w < 14$ or $w > -7$



- c. $w < -7$ or $w > 14$



- d. $w < -7$ or $w \geq 14$



25. What is the graph of $x < -8$ or $x > 6$?

