MATH-A

Chapter 3 Test - Oct. 2017

[Exam ID:0PS0R5

Exam not valid for Paper Pencil Test Sessions

1 **What is the solution to the following inequality?**

$$\frac{-w + 6}{2} < 5$$

A w < -4
B w > -4
C w > -2
D w > -16

2 **What is the solution to the following inequality?**

$$-3x - 1 < -4.6$$

A $x < -1.9$
B $x < -3.6$
C $x > 1.2$
D $x < 1.8$

3 **Which is an inequality?**

A 5x – 6 = 9
B 5x - 6
C 5x + 6 > 9
D 5

4 **What is the solution to the following inequality?**

$$\frac{1}{7}(6x + 4) \leq 1$$

A $x \geq \frac{11}{6}$

B $x \leq \frac{1}{2}$

C $x \geq \frac{1}{2}$

D $x \geq \frac{-18}{7}$

5 **3x + 4_____**

Which should be placed on the blank line to make an inequality?

A > 1

B $+ 1$

C $- 1$

D $= 1$

6 Directions: Click on all the correct answers.

Christopher incorrectly solved an inequality as shown.

Step 1: $-4(x - 7) + 1 \leq -3$
Step 2: $-4(x - 7) \leq -4$
Step 3: $-4x + 28 \leq -4$
Step 4: $-4x \leq -32$
Step 5: $x \leq 8$

Between which two consecutive steps did Christopher make a mistake?

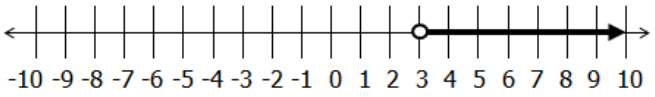
- Step 1
- Step 2
- Step 3
- Step 4
- Step 5

7 **What is the value of d in the inequality $14 - 3d < 8d - 22 + 7d$?**

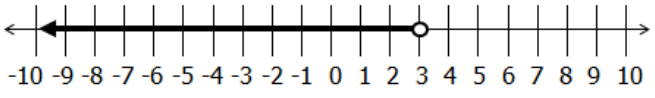
A $9 < d$ **B** $2 < d$ **C** $d < 2$ **D** $d < -3$ **E** $3 < d$

8 Directions: Click and drag each inequality to the correct box.

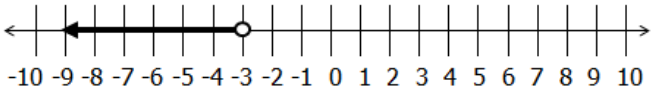
Place each inequality next to the corresponding graph.



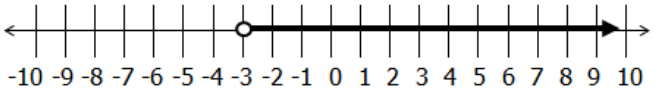
$2x - 5 > x - 2$



$4x + 3 < 2x + 9$



$2 - 3x > 2x + 17$



$9 - 5x < 3x + 33$

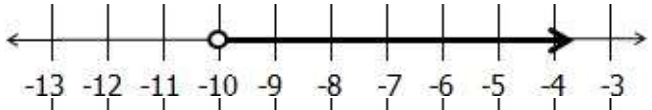
9 Directions: Click and drag each symbol to the correct box.

Place each inequality symbol in a box to make the solution true.

$-20 > -2q + 4$	$12 < \quad q$
$-7(x + 9) \geq 7 + 3x$	$x \leq \quad -7$
$4p + 15 \geq p + 3$	$p \geq \quad -4$
$-78 > 10 + 11w$	$-8 > \quad w$

10 **The solution to the inequality $-1 > \frac{x}{-2} - 6$ is best represented by —**

A



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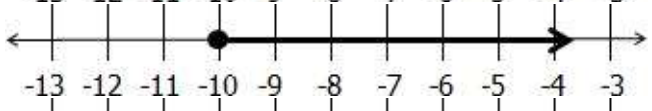

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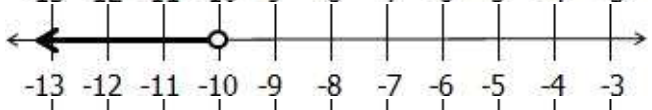
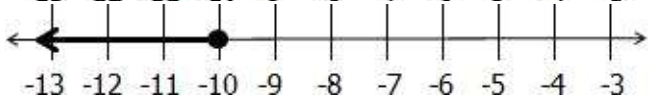
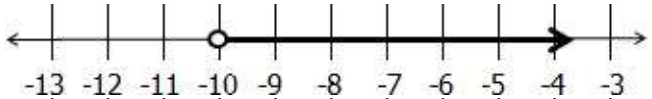


D



11 **Which graph represents the solution to the inequality $-7(s + 9) \geq 37 + 3s$?**

A



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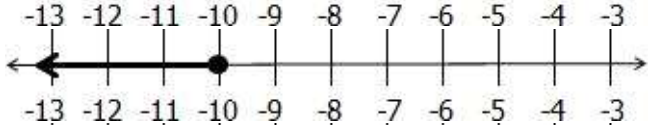

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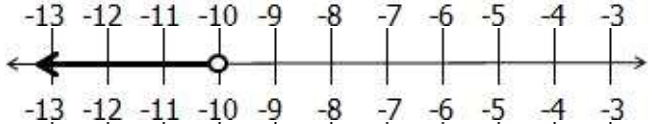
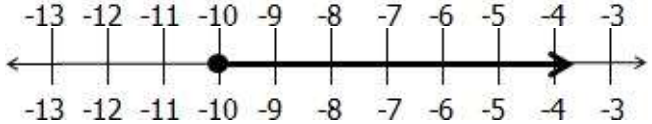


D



12 $$3x + 6 < x + 30$$

Which solution satisfies the inequality?

A $\{x \in R | r < 12\}$
B $\{x \in R | r < 6\}$
C $\{x \in R | r > 6\}$
D $\{x \in R | r > 12\}$

13 **Which inequality represents all the solutions of $9(4x - 8) < 4(6x + 9)$?**

A $x < -3$
B $x > -3$
C $x < 9$
D $x > 9$

14 $$9a - 12 \leq 12a - 6$$

Which solution satisfies the inequality?

A $\{a \in R | a \leq -2\}$
B $\{a \in R | a \leq 2\}$
C $\{a \in R | a \geq -2\}$
D $\{a \in R | a \geq 2\}$

15 **What is the solution to the following inequality?**

$$6(x + 1) \geq 7$$

A $x \geq 1$

B $x \geq \frac{13}{6}$

C $x \geq 6$

D $x \geq \frac{1}{6}$

16 **What is the solution to the inequality below?**

$$2x - 7 \geq 15$$

A $x \geq 8$

B $x \leq 11$

C $x \geq 11$

D $x \leq 8$

17 **What is the solution to the following inequality?**

$$-6 < 3(-6 - 4x)$$

A $x < -1$

B $x < 0$

C $x < 1$

D $x > -1$

18 **What is the solution to the inequality shown below?**

$$-2x + 3 > 7$$

A $x < -2$

B $x < 3$

C $x < -5$

D $x > 2$

19 **Which inequality is equivalent to $4x - 2y \leq 8$?**

A $y \leq 2x - 4$

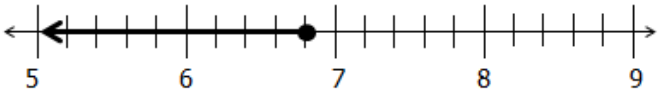
B $y \geq -2x - 4$

C $y \geq 2x - 4$

D $y \leq -2x - 4$

20 Directions: Click on the inequality you want to select. You must select all correct inequalities.

Identify the inequalities that can be represented by the graph shown.



- $5a + 7 \leq 41$
- $\frac{-5}{2}a + 3 \leq -14$
- $\frac{5}{2}a + 2 \geq 19$
- $-15(a + 6) \leq -12$
- $5a - 12 \leq 22$
- $10 - 5a \leq -24$

21 **What is the solution for the following inequality?**

$$24 \geq -4(u + 2)$$

A $\{u \in R | u \leq -8\}$
B $\{u \in R | u \geq 8\}$
C $\{u \in R | u \leq 8\}$
D $\{u \in R | u \geq -8\}$

22 Directions: Type an inequality in the box. Use the < or > for the inequality sign.

Solve for x :

$$-2x + 6 < x - 6$$

23 **What is the solution to the following inequality?**

$$-16 < 14 - 5x$$

A $x > -2$
B $x < -25$
C $x > 6$
D $x < 6$

24 **What is the solution to $8 - 2x \geq -4$?**

A $x \geq 6$
B $x \leq 6$
C $x \geq 2$
D $x \leq 2$

25 **What values of x make the following inequality true?**

$$-3(x + 1) \leq 15$$

A $x \geq 6$
B $x \leq -6$
C $x \leq 6$
D $x \geq -6$

26 **What is the solution to the following inequality?**

$$\frac{1}{4}x > \frac{3}{4}x + 1$$

A $x < -\frac{1}{2}$
B $x > -2$
C $x > -\frac{1}{2}$
D $x < -2$

27 **If $\frac{1}{4}x + 1 > \frac{15}{2}$, then —**

A $x > 26$
B $x > 28$
C $x > 29$
D $x > \frac{13}{2}$

28 **What is the solution to the inequality**

$$7x - 5 \geq x + 1?$$

A $x \geq -1$
B $x \leq \frac{5}{2}$
C $x \geq 1$
D $x \leq 1$

29 **What is the solution for the following inequality?**

$$-5(p - 19) < -10 + 2p$$

A $\{p \in R | p < 35\}$
B $\{p \in R | p > 15\}$
C $\{p \in R | p < 15\}$
D $\{p \in R | p > 35\}$

30 **Jorge makes $9.50 an hour for working at a Shoe Store. He wants to buy a skateboard that costs $110.00. How many hours must Jorge work in order to purchase his skateboard?**

A At least 12 hours
B No more than 11 hours
C At least 11 hours
D No more than 8 hours

31 **What is the solution to the following inequality?**

$$3(x - 3) \leq 3$$

A $x \leq 4$
B $x \leq 2$
C $x \geq 2$
D $x \geq 4$

32 **What is the solution for the following inequality?**

$$3r + 6 < r + 28$$

A $\{r \in R | r > 11\}$
B $\{r \in R | r > -17\}$
C $\{r \in R | r < 11\}$
D $\{r \in R | r < -17\}$

33 **Solve:**

$$\frac{5}{4}(x + 3) \geq -\frac{1}{2}x + \frac{9}{2}$$

A $x \leq -\frac{3}{7}$

B $x \leq \frac{3}{7}$

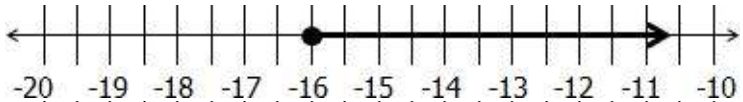
C $x \geq -\frac{3}{7}$

D $x \geq \frac{3}{7}$

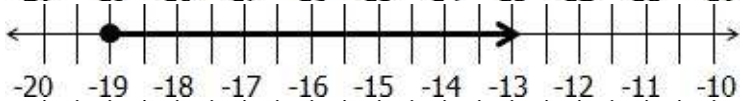
34 **Which graph represents the solution to the inequality**

$$3 + \frac{5}{2}x \geq 2x - \frac{13}{2}$$ **?**

A



B



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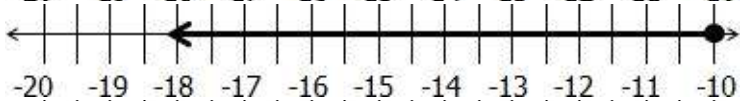

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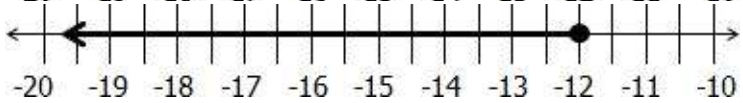

35 **5x – 4_____**

Which should be placed on the blank line to make an inequality?

A > 11

B – 11

C + 11

D = 11