

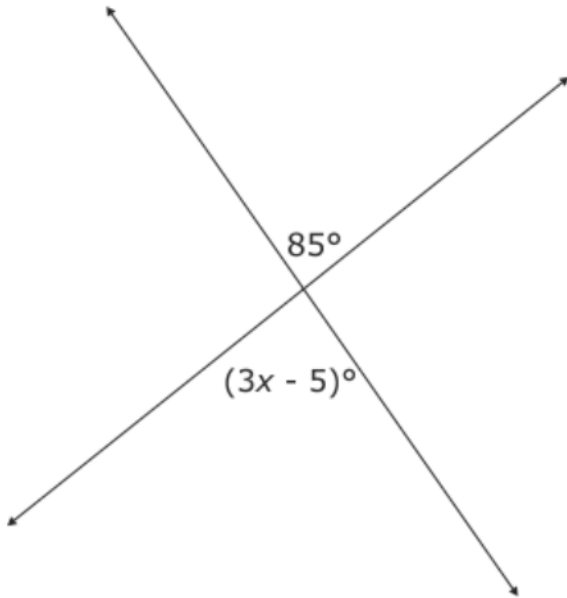
**TEST NAME: ARMS 2019-2020 7th Grade Unit 2 Test**  
**TEST ID: 3252334**  
**GRADE: 07 - Seventh Grade**  
**SUBJECT: Mathematics**  
**TEST CATEGORY: School Assessment**

Student: \_\_\_\_\_

Class: \_\_\_\_\_

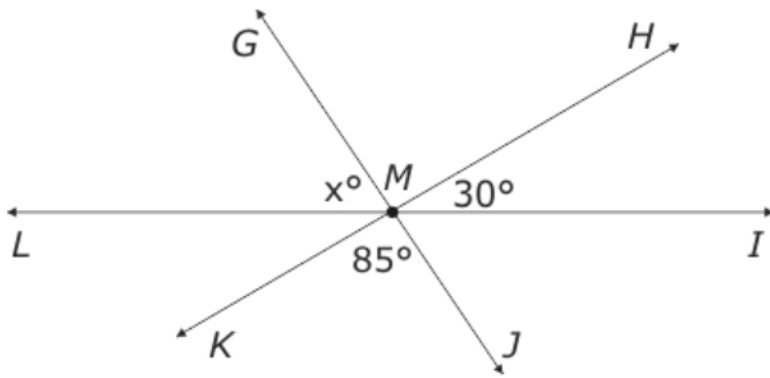
Date: \_\_\_\_\_

1. What is the value of  $x$  in the figure below?



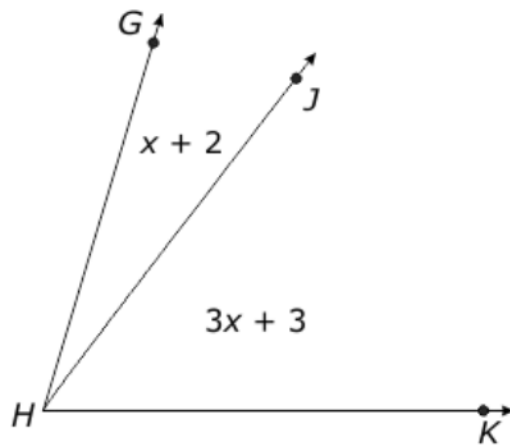
- A. 30
- B. 85
- C. 28
- D. 180

2. In the figure below, all lines intersect at point M.



What is the value of  $x$ ?

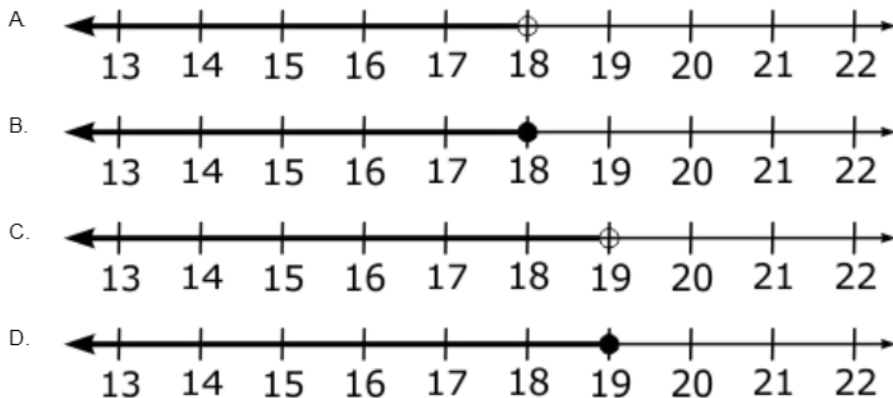
- A. 65
  - B. 30
  - C. 60
  - D. 85
3.  $\angle GHJ$  and  $\angle JHK$  are adjacent angles.  $\angle GHK$  measures  $73^\circ$ .



What is the measure of  $\angle GHJ$ ?

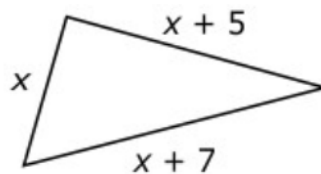
- A.  $17^\circ$
- B.  $19^\circ$
- C.  $54^\circ$
- D.  $57^\circ$

4. Angle  $J$  and angle  $K$  form a linear pair. The measure of angle  $J$  is  $2x + 5^\circ$ . The measure of angle  $K$  is  $3x - 10^\circ$ . What is the degree measure of angle  $K$ ?
- A. 37  
 B. 19  
 C. 101  
 D. 47
5. Which set of values makes the inequality  $\frac{1}{4}x + 2 \geq 0$  true?
- A.  $\{-8, -4, 0, 4, 8\}$   
 B.  $\{-12, -8, 0, 4, 8\}$   
 C.  $\{-20, -16, -12, 0, 4\}$   
 D.  $\{-20, -16, 0, 16, 20\}$
6. What is the solution to the inequality  $6 - 2x < 4$ ?
- A.  $x < -1$   
 B.  $x > -1$   
 C.  $x < 1$   
 D.  $x > 1$
7. A taxi service charges a \$1.95 flat rate plus \$0.55 per mile. Jason only has \$12 to spend on a ride. Which graph **best** represents the number of miles Jason can afford to travel?



8. Julie has \$200 to plan a dance. There is a one-time fee of \$150 to reserve a room. It also costs \$1.50 per person for food and drinks. What is the maximum number of people that can come to the dance?
- A. 33  
B. 34  
C. 100  
D. 133
9. What is the value of  $x$  in the equation  $12x - 4x + 6 = 10$ ?
- A. 0.25  
B. 0.5  
C. 1  
D. 2
10. Solve for  $x$ :  $-4(2x - 5) + 3x = 100$
- A. -24  
B. -16  
C. 11  
D. 16

11. The perimeter of the triangle below is 42 units.



What is the length of the shortest side, in units?

- A. 10  
B. 14  
C. 18  
D. 30

12. A club raised money for charity.

- The club has 25 members.
- The club has raised \$737 so far.
- Each member will raise the same amount of money.

If the club wants to raise a total of \$2,000, how much more money will each member need to raise?

- A. \$26.80
- B. \$29.48
- C. \$50.52
- D. \$109.48

13. Dan bought 3 copies of a book from a catalog. The total cost for the books was \$25.25, which includes \$3.50 for shipping. How much did each copy of the book cost?

- A. \$7.25
- B. \$8.42
- C. \$9.58
- D. \$7.50

14. Which list only contains numbers that are solutions to the inequality?

$$-a + \frac{1}{3} > \frac{1}{4}$$

- A. 1, 4, 7
- B. -9, -5, -1
- C.  $\frac{1}{3}$ ,  $\frac{5}{8}$ , 2
- D. -1, 0,  $\frac{1}{10}$

15. Angle 1 and Angle 2 form a linear pair. The measure of Angle 1 is  $(2x+8)^\circ$  and the measure of Angle 2 is  $(8x + 22)^\circ$ . What is the measure of Angle 1?

- A.  $15^\circ$
- B.  $38^\circ$
- C.  $52^\circ$
- D.  $142^\circ$