TEST NAME: **Exp Equations Ineq EOG practice**
TEST ID: **4042978**
GRADE: **07 - Seventh Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

1. The chess club can have at most 36 members. There are 3 times as many boys as girls in the chess club. Which inequality could be used to determine the possible number of girls, x, in the chess club?

   A. $x + 3x < 36$

   B. $x + 3x \leq 36$

   C. $x + 3x > 36$

   D. $x + 3x \geq 36$

2. Which expression is equivalent to $^-4x - 36$?

   A. $4(x - 9)$

   B. $2(2x - 18)$

   C. $^-2(2x - 18)$

   D. $^-4(x + 9)$

3. An inequality is shown.

$$-\frac{1}{3}x + \frac{1}{2} < 3.5$$

   What is the solution to the inequality?

   A. $x > {}^-12$

   B. $x < {}^-12$

   C. $x > {}^-9$

   D. $x < {}^-9$

4. The art club has a goal to raise at least $500 by selling paintings to the student body for $15 each. They have already spent $70 buying paint. Which inequality could be used to find the number of paintings the art club needs to sell to reach their goal?

    A $15x - 70 \leq 500$

    B. $15x - 70 \geq 500$

    C. $70x - 15 \leq 500$

    D. $70x - 15 \geq 500$

5. Jessie has 8 more pencils than Dylan. Together they have a total of 18 pencils. How many pencils does Dylan have?

    A   5

    B. 8

    C. 10

    D. 13

6. What is the solution to $0.5x - 2 < 5.5$?

    A $x < 7$

    B. $x < 9$

    C. $x < 13$

    D. $x < 15$

7. Norman is replacing his wooden deck that measures $11\frac{1}{2}$ feet by $8\frac{1}{2}$ feet. He wants to increase both the length and width of the deck floor by 2 feet. The wood costs $4.25 per square foot. To the nearest cent, how much will the wood for the new deck floor cost?

    A $823.44

    B. $602.44

    C. $423.94

    D. $415.44

8. Two expressions are shown below.

$$^-41x + k$$

$$\frac{3}{4}(^-28x \ - \ 12) \ - \frac{5}{6}(24x \ - \ 30)$$

What value of *k* will make the expressions equivalent?

A. $^-42$

B. $^-34$

C. 16

D. 114

9. What is the solution to $0.4x - 4 < 2.4$?

A. $x < \ ^-4$

B. $x < \ ^-2$

C. $x < 10$

D. $x < 16$

10. Two more than eleven times a number is equal to 24. What is the number?

A. 2

B. 4

C. 6

D. 9

11. Lawrence has $50.

- He wants to buy some T-shirts that cost $12 each.
- He also wants to have at least $10 left to buy lunch.

Which inequality shows the number of T-shirts, x, Lawrence can buy and still have at least $10 for lunch?

A. $x \leq 3$

B. $x \geq 3$

C. $x \leq 4$

D. $x \geq 4$

12. Which expression is equivalent to $^-6(3 + 4x)$?

A. $^-18 - 24x$

B. $^-18 + 24x$

C. $18 - 24x$

D. $18 + 24x$

13. What is the solution to $^-\frac{x}{14} + 2 > 4$?

A. $x > ^-28$

B. $x > ^-7$

C. $x < ^-7$

D. $x < ^-28$

14. The difference between 3 times a number x and 2 is 19. What is the value of x?

A. 7

B. 6

C. 5

D. 1

15. What is the solution to the equation $^-4x - 9 = ^-13$?

A. $x = {}^-5\frac{1}{2}$

B. $x = {}^-1$

C. $x = 1$

D. $x = 5\frac{1}{2}$

16. Henry went to an amusement park with $100.00 and spent all of it.

- He spent $\frac{1}{8}$ of the money on parking.
- He spent $42.50 on admission to the park.
- He spent 20% of the money on food.
- He paid a $12.75 fee for admission into a water park located inside the amusement park.
- He spent the remainder of his money on games that cost $1.75 each.

How many games did Henry play?

A. 12

B. 10

C. 9

D. 7

17. A factory has two types of employees: line workers and managers.

- There are 70 line workers that earn $85 per day.
- Managers earn $120 per day.
- The daily pay for the entire factory is $7,390.

How many managers are there?

A. 10

B. 12

C. 14

D. 16

18. Which expression is equivalent to $\frac{3}{4}x + 5 - 7 + \frac{1}{2}x$?

    A. $\frac{5}{4}x - 2$

    B. $\frac{4}{6}x - 2$
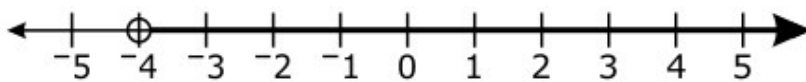
    C. $\frac{1}{4}x + 12$

    D. $\frac{4}{6}x + 12$

19. Which expression is equivalent to $(7 - 3k) - (4 - 5k) - (6 - 2k)$?

    A. $^-10k - 3$

    B. $^-4k + 3$

    C. $4k - 3$

    D. $10k + 3$

20. Which expression is equivalent to $7m + 5 + 6 + 3m$?

    A. $13m + 8$

    B. $10m + 11$

    C. $4m + 11$

    D. $4m + 8$

21. The number line below shows the solution to the inequality $2x + 3 \ \square \ ^-5$.


Based on the number line, which symbol should replace the box to make this inequality true?

    A. $>$

    B. $<$

    C. $\geq$

    D. $\leq$

22. Max read $\frac{1}{3}$ of his novel at school. He reads 22 more pages when he arrives home, making 127 pages read so far. How many pages are in Max's novel?

    A. 287

    B. 315

    C. 381

    D. 447

23. A shirt that normally costs $19.99 is on sale for 15% off. How much would Jason pay for 3 of the shirts with an 8% sales tax?

    A. $16.17

    B. $46.90

    C. $50.97

    D. $55.05

24. What is the solution to $85 \leq {}^-5x + 5$?

    A. $x \leq 16$

    B. $x \geq 16$

    C. $x \leq {}^-16$

    D. $x \geq {}^-16$

25. A rectangle is shown.

$$11x - 3$$

$$2x + 2$$
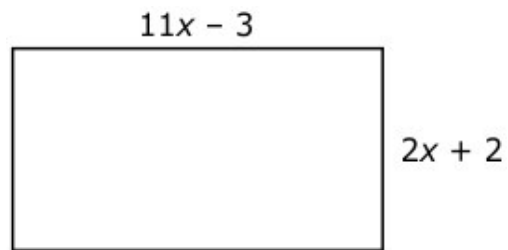
What is the perimeter of the rectangle?

A. $13x - 1$

B. $13x + 1$

C. $26x - 2$

D. $26x + 2$