Name: _____ Class: _____ Date: _____ ID: A

Algebra 1 Semester One Final Review 2017

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. A principal spent $100 each on c calculators for her school. Which expression shows the cost for all of the calculators?
A. $c + 100$ B. $100c$

____ 2. Evaluate $m+n$ for $m = 9$ and $n = 7$.
A. 2 C. 63
B. 16 D. 97

____ 3. Solve $x - 74 = 146$.
A. –220 C. 72
B. –72 D. 220

____ 4. Solve $19.5 = a + 2.4$.
A. –21.9 C. 17.1
B. –17.1 D. 21.9

____ 5. Which equation represents the relationship "3 less than a number is -6"?
A. $n - 3 = -6$ C. $3 + n = -6$
B. $3 - n = -6$ D. $n - 6 = 3$

____ 6. Solve $-11m = -132$.
A. –121 C. 12
B. –12 D. 121

____ 7. Solve $\frac{x}{4} = 6$.
A. 24 C. 10
B. -24 D. 2

____ 8. The quotient of n and –4 is 8. What is the value of n?
A. –32 C. 2
B. –2 D. 32

____ 9. Solve $6(z + 3) - 9 = 27$.
A. 0 C. 5.5
B. 3 D. 10.5

____ 10. Solve $\frac{h}{6} - 4 = -8$.
A. -24 C. 24
B. 72 D. -72

____ 11. Solve $-a + 7 = 2a - 8$.

A. -3
C. 5
B. $-\frac{1}{3}$
D. 15

____ 12. Tia's car needs repairs. Honest Harry will charge \$70 per hour plus \$130 for the part. Lucky Lou will charge \$80 per hour plus \$40 for the part. How long is the job if the two costs are the same?

A. $1\frac{2}{3}$ h
C. 17 h
B. 9 h
D. 20 h

____ 13. Solve $A = \frac{1}{2}bh$ for h.

A. $h = \frac{A}{2b}$
B. $h = \frac{b}{2A}$
C. $h = \frac{2A}{b}$
D. $h = A - \frac{1}{2}B$

____ 14. Solve $xy + 7 = n$ for y.

A. $y = xn - 7$
B. $y = \frac{n-7}{x}$
C. $y = x(n-7)$
D. $y = \frac{1}{x}(n+7)$

____ 15. Solve $|x| = 3$.

A. 3
B. 3, -3

____ 16. Solve $|x + 3| = 4$.

A. 1
C. no solution
B. -7
D. 1, -7

____ 17. A chef can bake 15 pies in one hour. What is the rate in pies per minute?

A. 0.25 pies/min
C. 1.6 pies/min
B. 0.625 pies/min
D. 4 pies/min

____ 18. Solve $\frac{4}{6} = \frac{-2}{s}$.

A. -48
B. -3

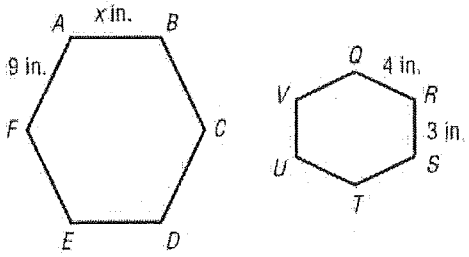
____ 19. The ratio of girls to boys in French class is 5:4. There are 12 boys in the class. How many girls are there?

A. 7
C. 15
B. 10
D. 17

____ 20. Kris is 1.5 meters tall and casts a shadow 4 meters long. At the same time, a statue casts a shadow 12 meters long. What is the height of the statue?

A. 4.5 m
B. 10.6 m
C. 24 m
D. 32 m

____ 21. *ABCDEF* ~ *RSTUVQ*. Find *x*.

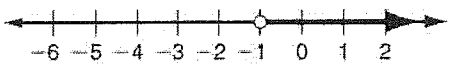


A. 2.25 in.
B. 6.75 in.
C. 10 in.
D. 12 in.

____ 22. Describe the solutions of $4 \le n + 2$ in words.

A. all real numbers greater than 4
B. all real numbers greater than or equal to 2
C. all real numbers less than 2
D. all real numbers less than or equal to 4

____ 23. Which graph represents $k < -1$?

A.


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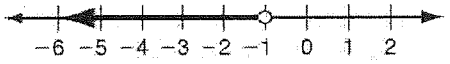

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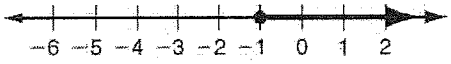

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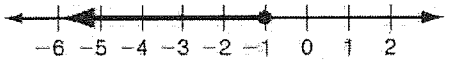


____ 24. Which inequality is shown by the graph below?

A. $x > -3$
B. $x \ge -3$
C. $x < -3$
D. $x \le -3$

____ 25. Which inequality represents the situation "no more than 160 students are in the freshman class"?

A. $s > 160$
B. $s \ge 160$
C. $s < 160$
D. $s \le 160$

____ 26. Solve $x + 7 > 2$.

A. $x > -5$
B. $x < -5$
C. $x > 5$
D. $x < 5$

____ 27. Solve $\frac{d}{-2} \geq 8$.

A. $d \geq 4$
B. $d \leq -16$
C. $d \geq -16$
D. $d \leq 16$

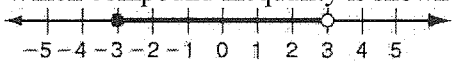
____ 28. Jasmine and her sister are saving to buy MP3 players. Jasmine has $50 and plans to save $10 per week. Her sister has $80 and plans to save $7 per week. In how many weeks will Jasmine have more money saved than her sister?

A. 2 weeks
B. 4 weeks
C. 10 weeks
D. 11 weeks

____ 29. Solve the compound inequality.
$-2 \leq m + 3 < 13$

A. $-5 \leq m < 10$
B. $-2 \leq m < 13$
C. $1 \leq m < 16$
D. $6 \leq m < 39$

____ 30. Which compound inequality is shown by the graph below?

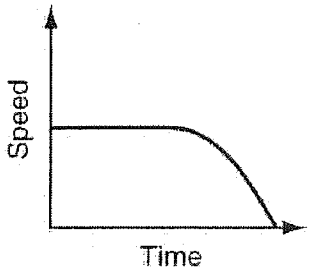


A. $x \geq -3$ AND $x > 3$
B. $x \geq -3$ AND $x < 3$
C. $x \geq -3$ OR $x > 3$
D. $x \geq -3$ OR $x < 3$

____ 31. Which represents the solution of $|2x| - 5 < -1$?

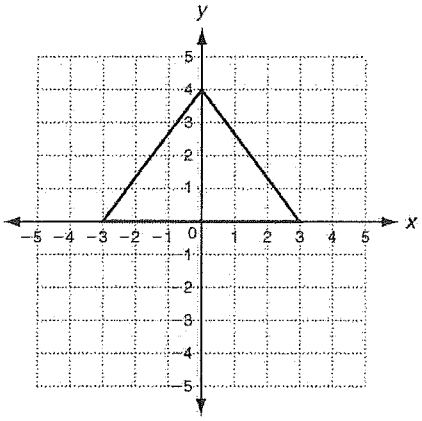
A. $x > -2$ OR $x < 2$
B. $x < -2$ OR $x > 2$
C. $x > -2$ AND $x < 2$
D. $x > 2$ AND $x < -2$

____ 32. Which situation could be represented by the graph below?



A. A person slows down and then travels at a constant speed.
B. A person travels at a constant speed and then slows down.
C. A person travels at a constant speed and then speeds up.
D. A person speeds up and then travels at a constant speed.

____ 33. What is the domain of the relation below?



A. $0 \le x \le 3$
B. $0 \le x \le 4$
C. $-3 \le x \le 3$
D. $-3 \le x \le 4$

____ 34. What is the range of the relation below?

x	0	1	2	3
y	1	2	4	8

A. $\{1, 2\}$
B. $\{0, 1, 2, 3\}$
C. $\{1, 2, 4, 8\}$
D. $\{0, 1, 2, 3, 4, 8\}$

____ 35. Which equation shows the relationship between x and y in $\{(1, -3), (2, -1), (3, 1)\}$?

A. $y = 2x - 5$
B. $y = x - 4$
C. $y = 2x$
D. $y = x - 2$

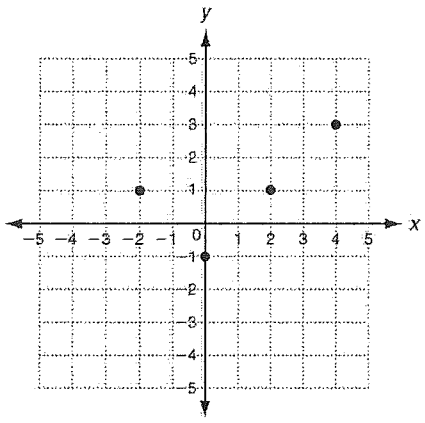
____ 36. Which function could represent the following situation: "An vending machine charges $0.50 per snack."

A. $f(s) = s + 0.50$
B. $f(s) = \frac{s}{50}$
C. $f(s) = 0.50s$
D. $f(s) = 50s$

____ 37. Evaluate the function $f(x) = 3x - 5$ when $x = 5$.

A. 3
B. 10
C. 75
D. 20

____ 38. Which function is graphed for the domain $\{-2, 0, 2, 4\}$?



A. $y = x - 1$
B. $y = |x| - 1$
C. $y = x^2 - 1$
D. $y = |x - 1|$

____ 39. Find the next three terms of the arithmetic sequence 5, 11, 17, 23, ...
A. 29, 34, 38
B. 28, 33, 38
C. 25, 31, 37
D. 29, 35, 41

____ 40. What is the 18th term of the arithmetic sequence $2, -2, -6, -10, \ldots$?
A. −72
B. −70
C. −68
D. −66