

Name _____

PreAP

Review for the Semester EXAM

- ~~The distance from the moon to the planet Mars is 452,000 miles. Write this number in scientific notation.~~
- George can eat 4.9 pounds of meat in 8 minutes in a hot dog eating contest. About how many pounds of hot dogs can he eat in 60 minutes?
- At H.E.B., okra costs \$.74 per pound, and tortillas cost \$1.36 for 2 packages. Which equation can be used to find t , the total cost if Jose buys 2.35 pounds of okra and 1 package of tortillas?
 - $t = (2.35 + 0.74) + (1.36 + 2)$
 - $t = (2.35 \cdot 0.74) + (2 \cdot 1.36)$
 - $t = (2.35 \cdot 0.74) + (1.36 \div 2)$
 - $t = (2.35 \cdot 0.74) + (2 \div 1.36)$
- Using the correct order of operations, solve the following problem: $24 \div 8 \cdot 2 + (4^2 + 2)$
- Evaluate the expression: $f(gh - k)$ if $f = 2$, $g = 3$, $h = -2$, $k = -4$
- If a 35 lb block of ice is melting at a rate of $\frac{1}{2}$ lb per minute, after how many minutes will the block of ice be 17 lb?
- The coldest day in Juneau, Alaska last year was -24° . This year the coldest day was 16° . How much warmer was the coldest day this year than last year?
- Simplify the following expression:
 $5(x + 1) - (x + 4)$
- The ratio of cars to trucks in the parking lot was 7:2. If there are 16 trucks, how many cars are there in the parking lot?
- Which fraction is between $\frac{1}{6}$ and $\frac{1}{9}$?
 - $\frac{1}{3}$
 - $\frac{2}{5}$
 - $\frac{1}{7}$
 - $\frac{3}{10}$
- Eleven less than three times a number is 43. Write an equation that could be used find the number.

12. Solve $12 = -4h + 7 + 11h$. Which of the following would be an appropriate first step to take in solving for "h"?
- a) adding 7 to both sides
 - b) adding 12 to both sides
 - c) multiplying both sides by 4
 - d) combining $(-4h)$ and $(11h)$

13. Solve the following equation:
 $\frac{4}{7}z + 8 = 20$

14. Bobby buys 6 candy bars for \$1.74. At the same price, how many candy bars can he buy for \$2.32?

15. The equation $c = .12g$ represents c , the total cost of g gallons of Mud Lite juice. Which table contains values that fit the equation?

a)

g	1	2	3	4
c	\$1.12	\$1.24	\$1.36	\$1.48

b)

g	1	2	3	4
c	\$.12	\$.24	\$.36	\$.48

c)

g	1	2	3	4
c	\$.12	\$.14	\$.18	\$.22

d)

g	1	2	3	4
c	\$1.00	\$1.12	\$1.24	\$1.36

16. George has a recipe for lime jello that uses $3\frac{1}{2}$ cups of cranberry juice. If George has 7 cups of cranberry juice, how much more does he need if he triples the recipe?

17. Solve the equation
 $4(x-2) - 5(x + 3) = 10$

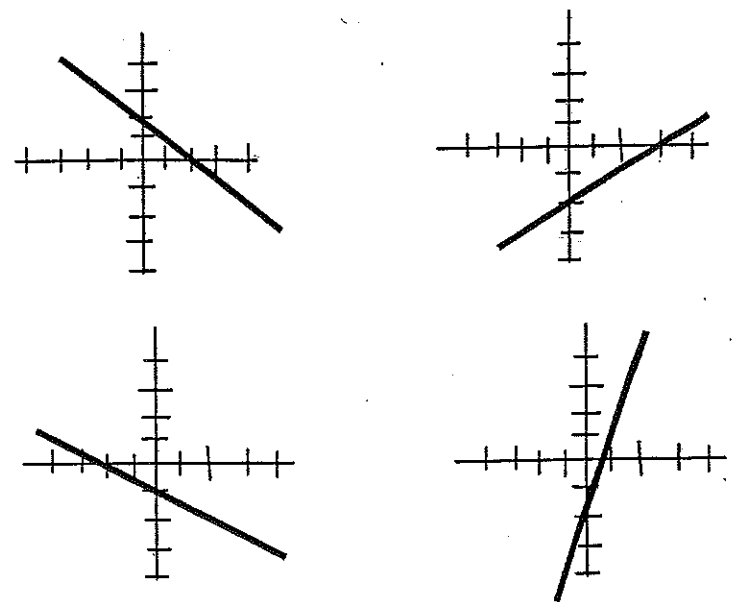
18. Consider the following table:

x	0	1	2	3	4	5	6
y	4	7	10	13	16	19	22

Write the equation that represents this relationship of x to y .

19. Which graph represents the table below?

x	y
-3	4
0	2
6	-2



20. A piece of equipment is designed to operate between the temperatures -16° and 98° . What is the range of temperatures?

21. To lay a drainage system it costs \$120 for every 50 feet. Which equation could be used to determine the cost of laying 300 feet of drainage?

22. Find the rule for the Nth term:

Position of Term	1	2	3	4	N
Value of Term	1	4	7	10	

23. A bus driver picks up 8 people at the first stop, 12 people at the second stop, and 16 people at the third stop. If this pattern continues, how many people will he pick up at the sixth stop?

24. I was looking for a cheap gift for my wife for Christmas and found a \$29.78 on sale for \$10.75. How much did I save by buying it on sale? (Put your answer in the grid)

				.		
--	--	--	--	---	--	--

25. Billy-Bob's Rent-Alls rents TV's for \$16 per day per TV, and one delivery and pickup fee of \$56 for any number of TV's. What is an equation that could be used to find the cost, x , of renting twelve TV's (including pickup and delivery)?

- a) $x = 56(12) + 16$
- b) $x = 16(56) + 12$
- c) $x = 16(56) - 12$
- d) $x = 16(12) + 56$

PreAP Semester Exam Review

26. Simplify: $\frac{3^3 + (5-2)}{3} + (5-3)^2$

27. In the set of chips, each plain chip has a value of 1, and each striped chip has a value of -1. What is the value of the set? $\emptyset\emptyset\emptyset\emptyset\emptyset\emptyset$

28. Janine's sisters took her out to lunch for her birthday. They bought her a cheeseburger for \$5.75, a large drink for \$1.25, and an ice cream sundae for \$2.25. If the two sisters split Janine's bill evenly, which equation can be used to find c , the amount in dollars and cents they each paid for her lunch?

- a) $c = (5.75 + 1.25 + 2.25) \div 2$
- b) $c = (5.75 + 1.25 + 2.25) - 2$
- c) $c = (5.75 + 1.25 + 2.25) \div 3$
- d) $c = (5.75 + 1.25 + 2.25) \times \frac{2}{3}$

29. Let n represent the position of the term in the sequence below.

-3, 3, 9, 15, 21, 27, ...

What algebraic expression (rule) can be used to find the n th term of the sequence?

30. What algebraic expression (rule) can be used to find the n th term of the sequence? 1, 4, 7, 10

31. Consider the table of values shown. The relationship of x to y is represented by which equation?

- a) $y = 6x - 3$
- b) $y = x + 7$
- c) $y = 4x$
- d) $y = 3x + 1$

X	2	3	4	5	6
Y	9	10	11	12	13

32. Which group does not contain three equivalent fractions, mixed numbers, and decimals? A) $\frac{19}{8}, 2\frac{3}{8}, 2.375$ b) $\frac{9}{4}, 2\frac{1}{4}, 2.25$ c) $\frac{11}{5}, 2\frac{3}{5}, 2.5$

33. It cost Dylan \$12.75 per document to have his signature witnessed by a Notary Public. If Dylan had 7 documents notarized, what was his total payment to the Notary Public?

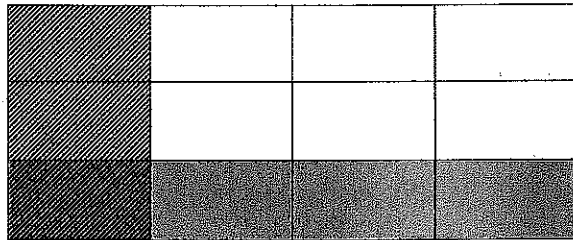
34. At a movie theater, a bag of popcorn cost \$4 and a soda costs \$1.50. Which equation can be used to find c , the cost of 2 bags of popcorn and 5 sodas?

- a) $c = (2 \times 4) + (5 \times 1.5)$ c) $c = (2 \times 5) + (4 \times 1.5)$
 b) $c = 5.5 \times (2 + 5)$ d) $C = 5.5 \times 2 \times 5$

35. Which of the following statements is not true?

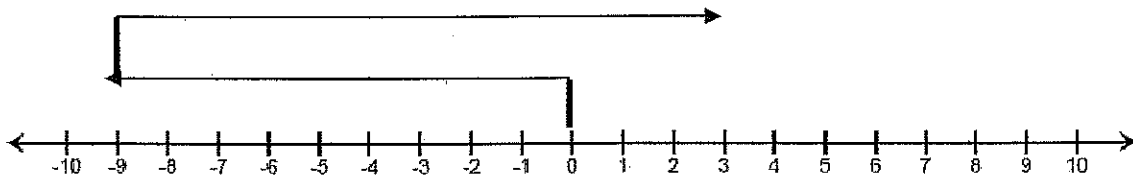
- a) $\frac{1}{3} > 30\%$ b) $\frac{1}{4} = 25\%$ c) $\frac{4}{5} > 90\%$ d) $\frac{1}{8} = 12\frac{1}{2}\%$

36. What multiplication expression does the model below represent?



Answer:
 ___ x ___ = ___

The number line below represents which addition expression and answer?



37. A piece of equipment for an oil rig is designed to function in temperatures as low as -30°C and as high as 105°C . What is the range in temperature that this equipment is designed to operate in?

38. Over a period of one week, the temperatures in Moscow, Russia were as follows (all in degrees Fahrenheit): -1, -3, 0, 2, -7, -5

What was the average temperature for this week?

39. William deposited \$25 in his account on Sunday, and then withdrew \$48 from his account on Monday. Write and solve the expression for the change in his account?

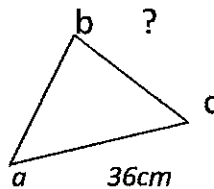
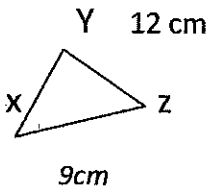
40. Kolton paid Koby \$425 to paint the barn, which took 18 hours, and to weed the garden, which took 9 hours. Which equation can be used to solve for w , the hourly wage that Koby received?

- a) $w = (425 \times 18) + 9$ c) $w = \frac{(18+9)}{425}$
 b) $w = (425 \times 18) - 19$ d) $w = \frac{425}{(18+9)}$

41. A garment steamer can steam clean between 15 and 18 garments per hour. If Carlee used the steamer for 6 consecutive hours, what is a reasonable estimate of the number of garments that Carlee cleaned?

- a) Less than 30 garments c) Between 50 and 70 garments
 b) Between 30 and 50 garments d) Between 90 and 110 garments

42. Triangle ABC is similar to triangle XYZ. What is the length of segment BC?



43. Paul takes 12 minutes to mow a lawn. Which equation could be used to calculate the number of minutes (m) it takes him to mow 63 lawns?

- a) $\frac{63}{m} = 12$ b) $m=12(63)$ c) $\frac{12}{m} = 63$ d) $63m = 12$

44. A dress that was originally priced at \$22.84 is on sale for 25% off. One way to calculate the savings is to multiply \$22.84 by _____?

- a) $\frac{1}{8}$ b) $\frac{1}{6}$ c) $\frac{1}{4}$ d) $\frac{2}{5}$

45. Golden Tours is advertising their Caribbean vacations at 50% off the normal \$680 cost. What will a ticket cost at this new price?

46. Brooke wants to make simple metal rings. If she uses gold, the ring will cost \$477, but if she uses silver the ring will cost \$212. How much can Brooke save if she has the ring made of silver?

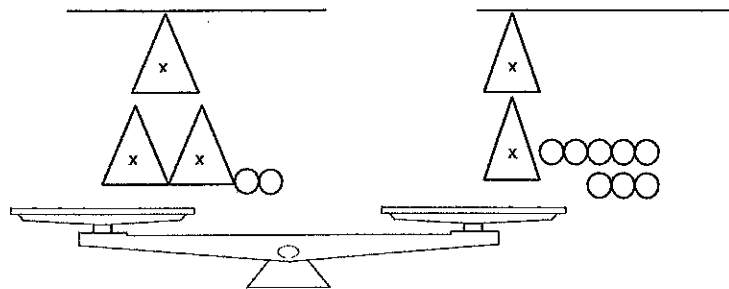
- a) \$219 b) \$265 c) \$321 d) \$439

47. Diane's basic phone service costs \$17.89 per month. How much will Diane pay over 11 months?

48. Howard uses $\frac{2}{5}$ of a bag of flour to make a sheet cake. How many bags of flour would he need to make $3\frac{1}{2}$ sheet cakes?

49. Aracell uses $11\frac{7}{8}$ yards of fabric to make five dresses. On average, how much fabric does she use for each dress?

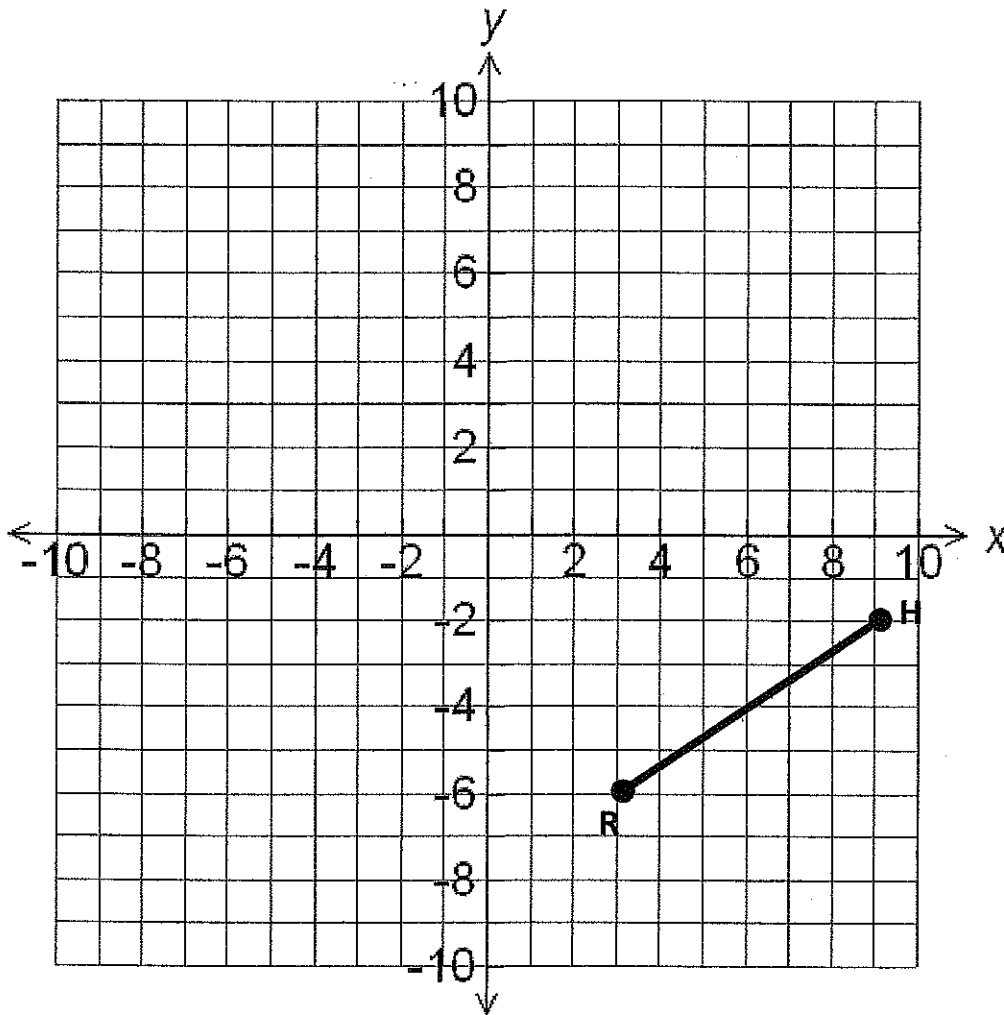
50. Write each expression on the line provided, and then determine the value of x . Show your work using the balance scale below.



What is the value of x ? _____

51. The students in Mr. Park's woodworking class are making birdhouses. The plans call for the side of pieces of the birdhouse to be $7\frac{1}{4}$ inches long. If Mr. Park has 6 boards that are $50\frac{3}{4}$ inches long, how many side pieces can be cut?

Use the graph below to answer the questions that follow.



52. Plot triangle A(-2, 6), B(-5, 1), C(-9, 3). If $\triangle ABC$ is translated 3 units right and 4 units down, what will be the translated coordinates of $A'B'C'$?

53. Which point lies on line \overline{RH} ?

- a. (3, -3)
- b. (5, -5)
- c. (-4, 4)
- d. (4, -4)

54. Reflect line \overline{RH} over the x-axis and give the reflected coordinates.
55. Triangle ABC has coordinates A(4, 7), B(-5, 8) and C(-3, -5). What are the coordinates for C' if the triangle is enlarged by a scale factor of 4?
56. A(4, -2), B(6, 4), C(-8, 2), D(-4, -2); $k = \frac{1}{2}$
57. J(0, 2), K(-2, 1), L(0, -2), M(2, -1); $k = 6$
58. The cost of a video game is \$29.95. Sales tax is 6%. About how much will the video game cost, including tax?
59. The school bought 6 new computers for the computer lab. Each computer has a retail price of \$979. The school received a discount of 12% on each computer. Find the amount of the discount and the final price for all 6 computers.
60. Carol did not prepare well for her math test on percents. She was only able to finish 75% of the test. There were 44 questions on the test. How many questions did Carol NOT answer?
61. Mr. Hawkins received a salary increase of 7%. If he used to earn \$550 a week, how much will receive after the salary increase?

**The semester exam will be ALL multiple choice questions.

