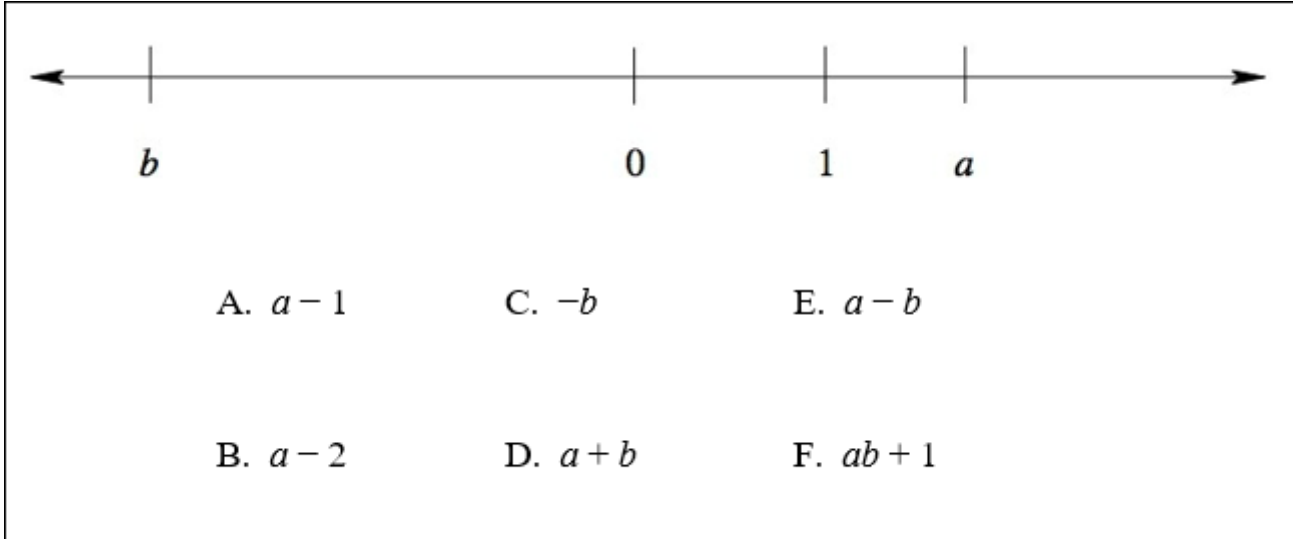


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Course: VLA DEMO Elementary 2017-18
Unit: Math 7 Short Cycle #1


Answer the following questions below:

1) A number line is shown below. The numbers 0 and 1 are marked on the line, as are two other numbers a and b . Which of the following numbers is negative? State all that apply. Explain your reasoning.



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2) For the equation provided, what value when substituted for x , will equal 0?

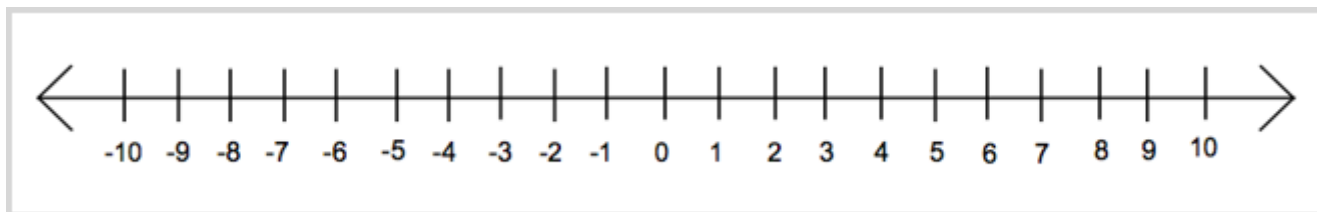
$$24 + x = 0$$

- A) 20
- B) -24
- C) 0
- D) 1
- E) 25

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3) Use the number line to solve $-1 + (-4)$.

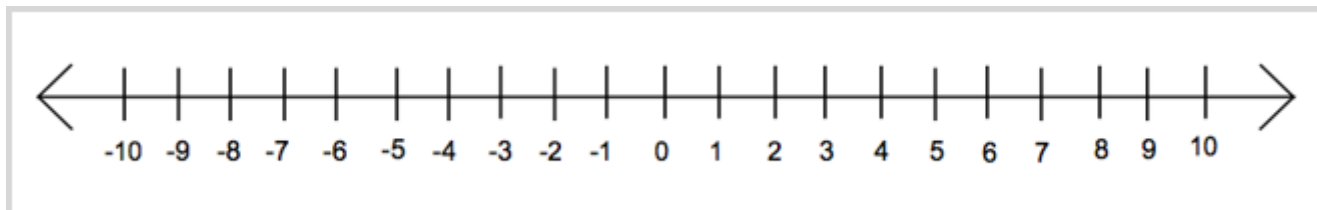


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4) Plot the points, -4 and 5 on the number line. Write a subtraction equation using -4 and 5 that shows the distance between the two points. Click here to print out the number line.



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5) Which expressions are equivalent to $-8 - (2.5 + 3.25)$. State all that apply.

- A. $(-8 - 2.5) + 3.25$ B. $(-8 - 2.5) - 3.25$ C. $-(8 + 2.5) + 3.25$
 D. $-(8 + 2.5) - 3.25$ E. $-3.25 + (-8 - 2.5)$ F. $3.25 + (-8 - 2.5)$
 G. $-(3.25 - 8) - 2.5$

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6) Evaluate:

$$\frac{(-16)(-3)}{4}$$

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7) Use the Distributive Property to Solve: $-3(5 + \frac{1}{2})$

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8) Ben needs $1 \frac{3}{8}$ feet of fabric to make one banner. How many banners can he make from $4 \frac{1}{2}$ feet of fabric?

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9) You're going back-to-school shopping. You have chosen a pair of pants that are \$15 and five uniform shirts that cost \$12 each. But the pants are \$5 off. What's the total (without tax)?

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10) Convert $\frac{5}{8}$ into a decimal.

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11) A recipe for ricotta cheese calls for $\frac{1}{2}$ cup of whole milk for every $\frac{1}{4}$ cup of heavy cream. How much whole milk should be used for every 1 cup of heavy cream?

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12) Does the data in the table represent a proportional relationship?

Gallons of Gas Used	Distance Driven (in Miles)
4	100
2	50
1	25
0.5	12.5

- A) Yes
 B) No

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13) Since a middle school opened, the girls' basketball team has had the same record every season. The team has won a total of 169 games while losing only 13 games. Find the constant of proportionality.

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14) A botany student drew a sketch of a birch tree using a scale of 1 inch to 2 meters. Find the actual height of the tree, if it measures 3 inches in the sketch.

- A) 7 meters
 B) 2 meters
 C) 6 meters
 D) 5 meters

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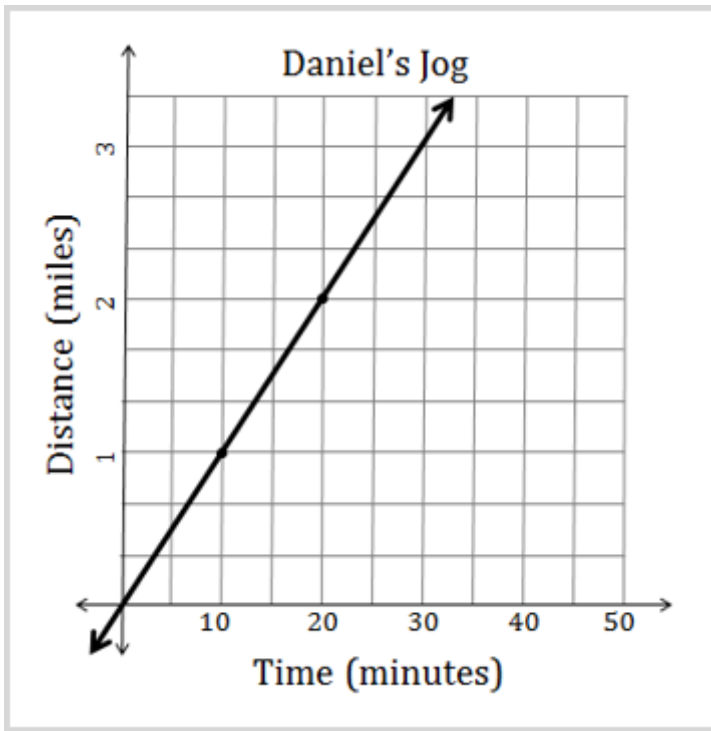
15) Ties at a department store cost \$14 each. Which equation shows the proportional relationship of the total cost, c , in dollars for a number of ties, t ?

- A) $t = 14c$
 B) $c = 14t$
 C) $t = 14 / c$
 D) $c = t / 14$

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16) Which of the following best explains the meaning of the point (10, 1) in terms of the scenario?



- A) Daniel jogs 10 miles in 1 minute
- B) Daniel jogs 10 miles per minute
- C) Daniel jogs at a rate of 10 miles an hour
- D) Daniel Jogs 1 mile in 10 minutes

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17) Anna enjoys dinner at a restaurant in Washington, D.C., where the sales tax on meals is 10%. She leaves a 15% tip on the price of her meal before the sales tax is added, and the tax is calculated on the pre-tip amount. She spends a total of \$27.50 for dinner. What is the cost of her dinner without tax or tip?

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18) Last year the Hiking Club had 14 members. This year there are 24 members in the club. What is the percentage of change in the number of club members?

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All Finished! Review My Answers

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Course: CA Math 7
Unit: Math 7 Short Cycle #2

Answer the following questions below:

1) Malia is at an amusement park. She bought 14 tickets, and each ride requires 2 tickets.

$14 - 2x$ represents the number of tickets Malia has left after she has gone on x rides. What does the term $2x$ represent?

- A) The number of tickets Malia has spent
- B) The number of tickets Malia started with
- C) How much money Malia spent
- D) Malia's remaining tickets

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2) Combine Like Terms: $1.9w + 5x + 3.4w$

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3) Factor: $4x - 28$

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4) Enter the value of c , when the expression $21.2x + c$ is equal to $5.3(4x - 2.6)$.

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5) Jackie has \$25 and she earns \$10 for each lawn that she mows. Jackie wants to buy a concert ticket that costs \$65. What is the minimum number of lawns that Jackie needs to mow to buy the concert ticket?

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6) Sean received \$25 in cash donations for his Boy Scouts Fundraiser in addition to earning \$1.50 per candy bar sold. How many candy bars did he sell if he earned at least \$110?

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7) Molly had a \$10 gift certificate to download music. After buying 6 songs that each cost the same amount, Molly has \$4.06 left. How much did Molly pay for each song?

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8) Marcus has a pool that can hold a maximum of 4,500 gallons of water. The pool already contains 1,500 gallons of water. Marcus begins to add more water at a rate of 30 gallons per minute.

Which inequality shows the number of minutes, m , Marcus can continue to add water to the pool without exceeding the maximum number of gallons.

- A) $4500 \leq 30m + 1500$
- B) $4500 \geq 30m + 1500$
- C) $4500 = 30m + 1500$
- D) $1500 \geq 30m + 4500$

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9) Matt purchases a pair of shoes marked 50% off. He also uses a \$10 off coupon at checkout. He pays \$24 for the pair of shoes. Write and solve an equation to determine the original price.

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10) Marcia has studied the cost of tickets over time for her favorite sports team. She has created a model to predict the cost of a ticket in the future. C represents the cost of a ticket in dollars and y represents the number of years in the future. Her model is as follows.

$$C = 2.50y + 13$$

Based on this model, how much will the cost of a ticket increase in two years?

- A) \$5
 B) \$8
 C) \$13
 D) \$18
 E) \$26

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11) The Summers family has completed 35 miles of a road trip. The family wants to drive at least 245 miles by the end of the day. Ms. Summers plans to travel at a speed of 60 miles per hour for the rest of the trip.

The inequality $60h + 35 \geq 245$ represents the number of hours, h , the family plans to drive. Solve the inequality and graph the solution set on a number line.

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12) A rectangle has a width of m inches and a length of k inches. If the perimeter of the rectangle is 1,523 inches, which of the following equations is true?

- A) $2(m + k) = 1523$
 B) $2m + k = 1523$
 C) $m + k = 1523$
 D) $mk = 1523$

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13) Jim makes an error and claims that the solutions to the inequality $9x - 12x \geq 6$ are $x \geq -2$. His work is shown:

$$9x - 12x \geq 6$$

$$-3x \geq 6$$

$$x \geq -2$$

What are the solutions to the inequality?

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14) What error did Jim make in the previous problem?

- A) Jim did not combine like terms correctly.
- B) Jim did not use the correct inequality.
- C) Jim did not reverse the inequality symbol.
- D) Jim did not use the Distributive Property correctly.

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15) The cost to rent a motorcycle is given by the following formula:

$$\text{Cost} = (3 \times \text{number of hours}) + \$2$$

Fill in the table.

Time in Hours	Cost in Dollars
1	5
4	?
?	17

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Course: CA Math 7
Unit: Math 7 Short Cycle #3

Answer the following questions below:

1) Sally's triangle has a 4 in. side a 5 in. side and a not included side of 40° . How many possible triangles can Sally make?

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2) A square pyramid is cut perpendicular to its base. Which of the following are possible cross sections?

A. Square

B. Rectangle

C. Hyperbola

D. Triangle

E. Trapezoid

A) A AND B

B) B AND C

C) D AND E

D) A AND D

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3) Ben wants to know how much tomato sauce he needs to make a 18-inch pizza. What information about the pizza is it most important for Ben to know, the area or the circumference?

A) The area because it indicates the distance around the pizza

B) The area because it indicates entire surface of the pizza

C) The circumference because it indicates the distance around the pizza

D) The circumference because it indicates the entire surface of the pizza

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4) What is the area of the circle with a diameter of 10 inches. Use 3.14 for pi.

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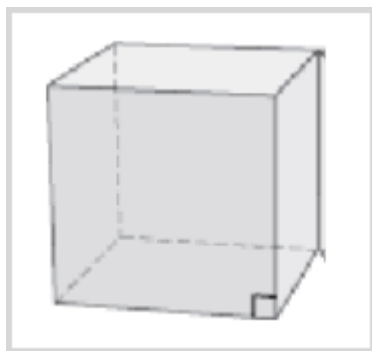
5) If the circumference of a circle is approximately 25 feet, what is the diameter? Use 3.14 for pi.

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6) Find the volume and surface area of the cube with a side length of 4 inches.



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7) If Angle A and Angle B are supplementary angles and Angle A is three times as large as Angle B, find the measures of Angle A and Angle B.

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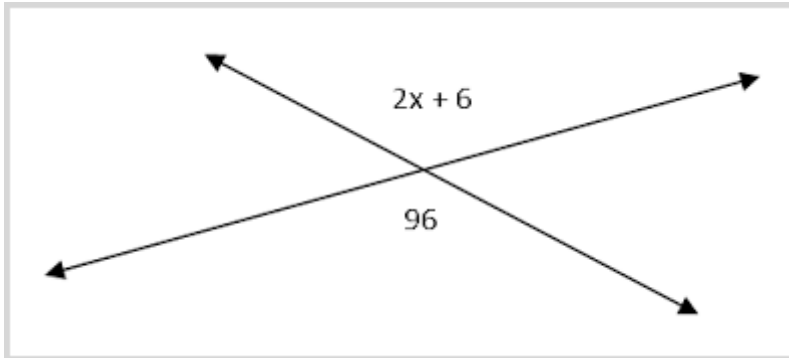
8) Angle 1 and Angle 2 are complementary angles. The measure of Angle 1 is 62 degrees. The measure of Angle 2 is $7(x + 2)$. Find the value of x .

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9) Find the value of x .



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10) Which of the following is a random sample of students at your school?

- A) 10 girls
- B) 10 of your friends
- C) 10 people you know
- D) 10 people picked from a hat

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11) A company has 3 sales departments at each of several locations across the US. Each local sales department has 120 employees. The company wants to survey its employees to determine the most effective sales method. Which sample should the company use to arrive at the most reliable conclusion:

- A) 24 employees from 1 sales department at 1 location
- B) 24 employees from 1 sales department at each location
- C) 24 employees from each sales department at 1 location
- D) 24 employees from each sales department at each location

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12) The data show average speeds in miles per hour in a bicycle race.

20, 21, 22, 18, 23, 25, 22, 20, 21, 18

The mean of the data is 21.

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13) A spinner is divided into equal parts 1 – 5. George spun the spinner 300 times. A table of outcomes is shown. Based on the table, what is the probability of the spinner landing on an even number?

Part	Times Spun
1	42
2	66
3	63
4	72
5	57

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14) Which of the following represents the theoretical probability of an unlikely event:

- A) 0
- B) $\frac{3}{11}$
- C) $\frac{1}{2}$
- D) $\frac{2}{3}$

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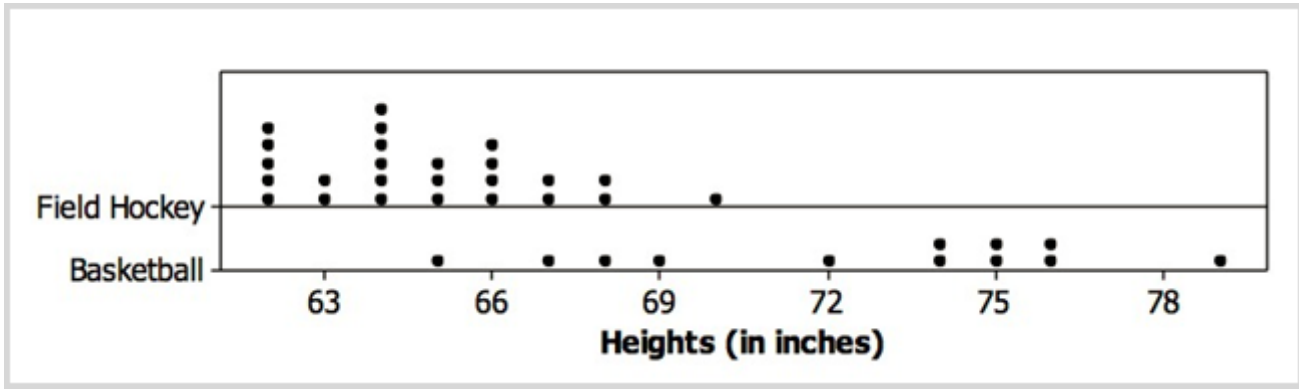
15) Joe flips a fair coin 2 times. What is the probability that the coin will land heads both times?

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16) Refer to the dot plot below.

- A. Based on visual inspection of the dot plots, which group appears to have the larger average height?
- B. Based on visual inspection of the dot plots, which group appears to have the greater variability in heights?



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