



CHANNEL VIEW

An Expeditionary Learning School



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June 2017
Entering Grade 8

Dear Parents:

In our effort to academically prepare your child for the coming school year, the math teachers at Channel View School for Research have prepared a math packet for the summer vacation to help your child reinforce and maintain his/her math skills.

Students are expected to complete all assigned work in the packet. Parents are asked to certify that their child completed the assignment. The math packet will be collected, scored, and reviewed in class. The completed math packet is due to your child's math teacher on the first day of school, **Thursday, September 7, 2017.**

Working together we can insure maximum success for your child. Your cooperation in this matter is appreciated.

We wish you a happy and healthy summer.

Sincerely,

Mrs. Harper-Richardson
Principal

I certify that my child has completed the required 2017 Summer Vacation Math Assignment.

Student's Name _____ Entering Grade _____

Parent's Signature _____ Date _____

Entering Grade 8: Common Core Math Summer Packet [23212]

Student _____

Class _____

Date _____

1. Which expression has a value of 31 when $x = 6$, $y = 10$, and $z = 11$?

A. $3xyz$

C. $4yz - 2x$

B. $2x + 3y - z$

D. $xy - 2z$

2. Dominic bought c children's tickets to the movies at \$7.25 each. He also bought one adult ticket for \$11.75. Which expression represents the total cost of the movie tickets?

A. $11.75c + 7.25$

C. $7.25c + 11.75$

B. $11.75c - 7.25$

D. $7.25c - 11.75$

3. The new building in City Center is 345 feet taller than the Jefferson Building. Let h represent the height of the Jefferson Building. Which expression represents the height of the new building?

A. $h + 345$

C. $h - 345$

B. $345 - h$

D. $345h$

4. If the relationship between hours driven and distance traveled is $d = 45t$, which of the following ordered pairs would be graphed on the line that represents the relationship?

A. (3, 15)

C. (4, 180)

B. (4, 60)

D. (5, 9)

5. Which number is **not** a solution for the inequality below?

$$\frac{x}{2} \geq 12$$

A. 6

C. 25

B. 24

D. 100

6. Which of the following is equivalent to the expression $a + a$?

A. a^2

C. $a - a$

B. $a + 2$

D. $2a$

7. Which shows how to expand 7^4 ?

A. 74

C. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$

B. 7×4

D. $7 \times 7 \times 7 \times 7$

8. Juan buys c children's tickets at \$8 each. He also buys one adult ticket for \$12. Which expression is for the total cost of the tickets?

A. $12c + 8$

C. $8c - 12$

B. $8c + 12$

D. $12 - 8c$

9. The new county park has an area that is 3.5 times as great as the area of the old park. Let p represent the area of the old park. Which expression represents the area of the new park?

A. $3.5p$

C. $p + 3.5$

B. $p - 3.5$

D. $\frac{p}{3.5}$

10. Solve the equation $x - 4.5 = 17$

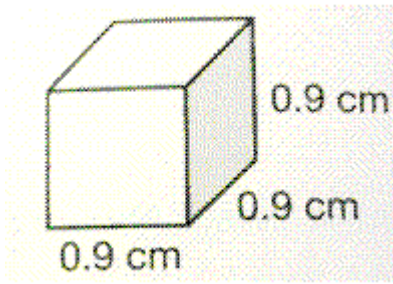
A. $x = 3.8$

C. $x = 21.5$

B. $x = 12.5$

D. $x = 76.5$

11. What is the volume of the cube?



A. 7.29 cm^3

C. 0.27 cm^3

B. 0.729 cm^3

D. 0.027 cm^3

12. What is area of a rectangle with width 6 meters and length 3 meters?

A. 6 m^2

C. 18 m^2

B. 12 m^2

D. 36 m^2

13. Which two coordinate pairs represent points located in the same quadrant?

A. $(5, 4)$ and $(5, -4)$

C. $(-5, -4)$ and $(-6, -2)$

B. $(-5, 4)$ and $(4, -5)$

D. $(5, -4)$ and $(-6, -2)$

14. The coordinates of the vertices of figure ABCD are A $(-3, 2)$, B $(-1, 2)$, C $(-3, 1)$ and D $(-1, 1)$. If the figure is reflected over the y-axis, what are the coordinates of A'?

A. $(-3, -2)$

C. $(3, 2)$

B. $(3, -2)$

D. $(-1, 2)$

15. Ellen is connecting three garden hoses to make one longer hose. The green hose is 6.25 feet long, the orange hose is 5.755 feet long, and the black hose is 6.5 feet long. What is the combined length of the three hoses?

A. 18.5 feet

C. 17.505 feet

B. 17.405 feet

D. 18.505 feet

16. Which of the following statements is true?

A. $-8 > -7$

C. $0 > -3$

B. $9 < 3$

D. $0 > 4$

17. Which statement is true for the numbers 8 and -8?

A. The absolute value of -8 is equal to the absolute value of 8.

C. The absolute value of 8 is greater than the absolute value of -8.

B. The absolute value of -8 is less than the absolute value of 8.

D. The absolute value of -8 is greater than the absolute value of 8.

18.

Sienna published $\frac{2}{3}$ of the poems she wrote in a book. Additionally, she published 4 different poems in the newspaper. The total number of poems she published was 22. How many poems had Sienna written?

A. 12

C. 31

B. 27

D. 39

19. The total area of two rectangles is $13\frac{1}{4}$ square inches. The dimensions of each rectangle are shown below.

Rectangle A: Length = 2 inches, width = $2\frac{1}{2}$ inches

Rectangle B: Length = $2\frac{3}{4}$ inches

What is the width of Rectangle B?

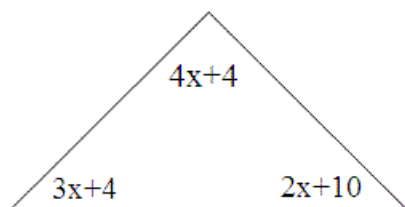
A. 3 inches

C. $8\frac{1}{4}$ inches

B. $5\frac{1}{2}$ inches

D. 11 inches

20. The sum of the measures of the angles of the triangle is 180° . Write and solve an equation for x .



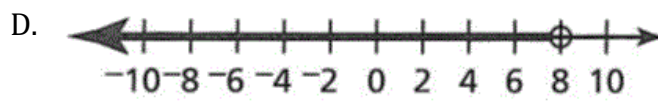
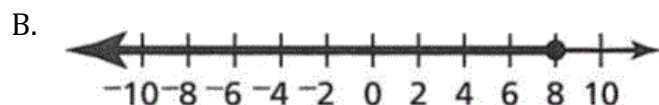
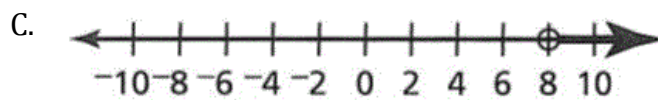
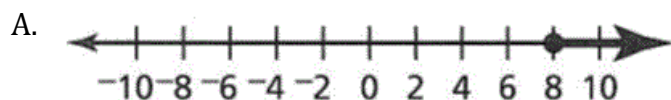
A. $x=12$

C. $x=20$

B. $x=14$

D. $x=18$

21. The sum of -4 and 2 times a number x is at least 12. Which number line shows the solution set for this inequality?



22. The variable d represents the number of dollars in a bank account:

$$\frac{1}{2}d - 10$$

Which phrase matches the expression?

- A. Ten dollars less than half the number of dollars in the account
- B. One half the difference of the dollars in the account and ten dollars
- C. One half the number of dollars in the account increased by ten dollars
- D. The product of half the dollars in the account and negative ten dollars

23. In a board game, Lauren gets x points for landing on a red space, $2x$ points for landing on a blue space, and $5x$ points for going all the way around the board. She lands on 21 red spaces, 19 blue spaces, and goes around the board twice, for a total of $21x + 19 \cdot 2x + 2 \cdot 5x$ points. Which expression also represents Lauren's total points?

- A. $(21 + 19) 2x + 10x$
- B. $42x$
- C. $69x$
- D. $(21 + 19 + 2)(x + 2x + 5x)$

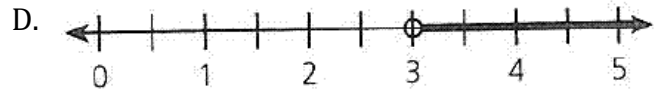
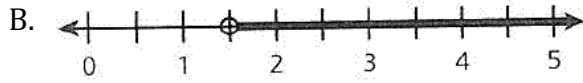
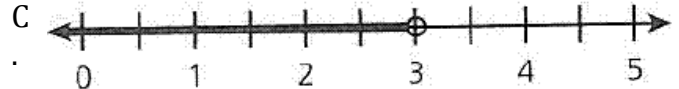
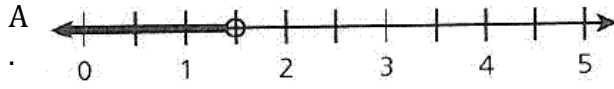
24. Which expression is equivalent to $2.25 + 2.25x + 1 - 0.75x + 2x$?

- A. $6.75x$
- B. $8.25x$
- C. $3.5x + 3.25$
- D. $4.5x + 1 - 0.75x + 2x$

25. Which inequality can be used to find how many \$1.25 snack packs can be purchased for \$10.00? Use s to represent the number of snack packs.

- A. $1.25s \geq 10.00$
- B. $1.25s \leq 10.00$
- C. $\frac{s}{1.25} \geq 10.00$
- D. $\frac{s}{1.25} \leq 10.00$

26 Which number line shows the solution to the inequality $4x + 3 > 9$?



27. Simplify: $3a + b + a - 5$

A. $3a + b - 5$

C. $4a - 4b$

B. $3a^2 - 5b$

D. $4a + b - 5$

28. Pete installs a circular window with a radius of 7.25 inches. Which of the following answers is closest to the area of the piece of glass that he will need?

A. 22.77 in^2

C. 45.53 in^2

B. 41.26 in^2

D. 165.13 in^2

29. A triangle can have which of the following set of angles?

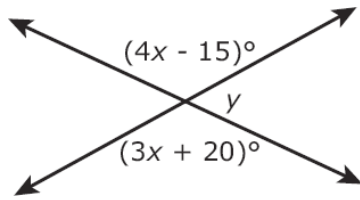
A. $80^\circ, 80^\circ, 80^\circ$

C. $90^\circ, 100^\circ, 45^\circ$

B. $65^\circ, 35^\circ, 80^\circ$

D. $50^\circ, 45^\circ, 65^\circ$

30. The figure shows two lines that intersect.



What is the measure of angle y ?

- A. 35°
- B. 55°
- C. 85°
- D. 125°

31. Evaluate the following expression:

$$3(4 - 2) - 4(2 + 9)$$

- A. -38
- B. 38
- C. 11
- D. 50

32. Which expression has a value of -24?

- A. $-18 + 14$
- B. -8×3
- C. -6×-4
- D. $48 \div 2$

33. Simplify $-\frac{15}{35} \times -7$.

- A. $-7\frac{3}{7}$
- B. -3
- C. 3
- D. $7\frac{3}{7}$

34.

A dolphin calf swims at a depth of $-\frac{7}{4}$ feet from the sea surface. An adult dolphin swims at a depth $\frac{5}{3}$ times the depth at which the calf swims. What is the depth, in feet, of the adult dolphin from the sea surface?

A. $-2\frac{11}{12}$

C. $1\frac{1}{20}$

B. $-1\frac{1}{20}$

D. $2\frac{11}{12}$

35. Andrew and Emily are playing a word game. For each correct answer, they earn 10 points, and for each incorrect answer, they lose 5 points. At the end of the game, Andrew has 55 points and Emily has -10 points. How many more points does Andrew have than Emily has?

A. -65

C. 45

B. -45

D. 65

36.

Mari bought $124\frac{7}{20}$ feet of fabric to make some curtains. What is the length of the fabric written as a decimal?

A. 124

C. 124.4

B. 124.35

D. 124.3

37. In the recent economic recession, Eduardo lost money. His account is -\$465 from his original balance. How much money will he have to deposit in order for it to be back to where the account started?

A. -\$465

C. \$930

B. \$465

D. -\$930

38. A stock in the stock market was worth 5 points when it first came on the market. It then rose 4 points, dropped 3 points, and then dropped 2 more points by the end of the day. Where did the stock end?

A. 9 points

C. 5 points

B. 6 points

D. 4 points

39. Ms. Smith's special account has a balance of \$43.00. She wrote a check for \$50.00. What is her new balance?

A. \$93.00

C. -\$7.00

B. \$7.00

D. -\$93.00

40. Which of the following is the correct solution to the problem below?

$$-\frac{9}{3} + \frac{-51}{17}$$

A. 1

C. 0

B. -3

D. -6

41. A new school has a teacher-to-student ratio of 2:15. The school has 42 teachers. How many students are there in the school?

A. 84

C. 630

B. 315

D. 294

42. A warehouse is being remodeled in two phases. During the first phase, the 250-square-foot storage area will increase in size by 10%. During the second phase, the size of the new storage area will increase by an additional 20%. What is the total size of the storage area, in square feet, after the second phase of remodeling?

A. 275 square feet

C. 295 square feet

B. 280 square feet

D. 330 square feet

43. The Jackson family drove 496 miles in 8 hours. Which is the unit rate in fraction form?

A. $\frac{496 \text{ miles}}{1 \text{ hour}}$

C. $\frac{1 \text{ mile}}{62 \text{ hours}}$

B. $\frac{62 \text{ miles}}{1 \text{ hour}}$

D. $\frac{1 \text{ mile}}{496 \text{ hours}}$

44. Maria is tossing a fair coin. She tosses the coin ten times and it lands on heads eight times. If Maria tosses the coin an eleventh time, what is the probability that it will land on heads?

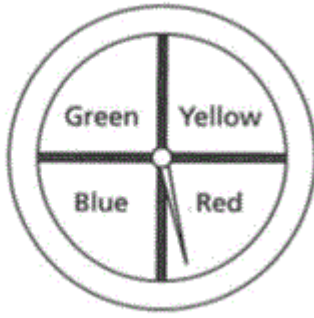
A. $\frac{1}{5}$

C. $\frac{4}{5}$

B. $\frac{1}{2}$

D. $\frac{3}{2}$

45. A spinner is shown below.



If Lan spins the spinner 300 times, how many times should she expect it to stop in the yellow region?

- A. 60
B. 75
C. 100
D. 133

46. A hat contains 5 red balls, 8 green balls, and 9 yellow balls. Rina chooses one ball at random from the hat.

What is the probability that Rina chooses a green ball?

- A. $\frac{1}{11}$
B. $\frac{4}{11}$
C. $\frac{9}{22}$
D. $\frac{5}{11}$

47. What is half of 2^6 ?

- A. 1^3
B. 1^6
C. 2^3
D. 2^5

48. Sarah mixes $\frac{2}{3}$ cup of low fat milk and $\frac{1}{2}$ cup of skim milk and the mixture has 111 calories. She knows that if she mixes one cup of low fat milk and one cup of skim milk that the mixture will have 188 calories. How many calories are in one cup of low fat milk and how many calories are in one cup of skim milk?

A. 102 calories in a cup of low fat milk and 86 calories in a cup of skim milk

C. 86 calories in a cup of low fat milk and 102 calories in a cup of skim milk

B. 102 calories in a cup of low fat milk and 40 calories in a cup of skim milk

D. 40 calories in a cup of low fat milk and 102 calories in a cup of skim milk

49. Which table represents a function?

A.

x	3	4	5	6	6
y	4	4	5	5	7

C.

x	-4	-2	-2	0	2
y	0	2	0	-2	-4

B.

x	-2	-1	0	0	0
y	1	2	3	4	5

D.

x	-6	-5	-3	0	1
y	3	0	3	0	3

50. The metal composition of a penny is 97.5% zinc and only 2.5% copper. How would 2.5% be written as a decimal?

A. 2.500

C. 0.25

B. 2.05

D. 0.025