

Sample Documents

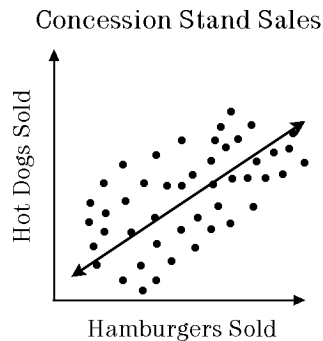
NC Sec Math Testlets
(NC5)

EDUCAIDE SOFTWARE

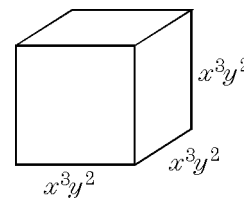
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Time limit: 40 minutes

1. Which of the following *best* describes the slope of the line ($m = \frac{2}{3}$)?



- a) For every two extra hot dogs sold, there will be a decrease of three hamburgers sold.
- b) For every three extra hot dogs sold, there will be an increase of two hamburgers sold.
- c) For every two less hot dogs sold, there will be an increase of three hamburgers sold.
- d) For every two extra hot dogs sold, there will be an increase of three hamburgers sold.
2. Evaluate: $-5a - 8b$ when $a = -6$ and $b = 3$
- a) -54
- b) 6
- c) 33
- d) 54
3. The area of an airplane wing is equal to the span times the average chord length. Find the area of the wing if the span is 65 feet and the average chord length is 7.3 feet.
- a) 443.5 ft^2
- b) 463.5 ft^2
- c) 474.5 ft^2
- d) 563.5 ft^2
4. Simplify: $4(3 \cdot a)$
- a) $\frac{3}{4}a$
- b) a
- c) $7a$
- d) $12a$
5. A local store has a 25% discount on all clothing. How much would you have to pay for a suit which ordinarily sells for \$220?
- a) \$55
- b) \$165
- c) \$195
- d) \$245
6. Find $\sqrt{45.6}$ to the nearest hundredth.
- a) 6.7
- b) 6.75
- c) 6.76
- d) 6.8
7. Simplify: $12\sqrt{7} - 5\sqrt{28}$
- a) $-8\sqrt{7}$
- b) 2
- c) $2\sqrt{7}$
- d) $2\sqrt{14}$
8. Find the volume of the cube.
- a) x^6y^4
- b) x^8y^6
- c) x^9y^6
- d) $x^{27}y^8$



9. If $4 + x = 10$, then what does $x - 3$ equal?
- a) 6
- b) 3
- c) 1
- d) -4
10. Simplify: $2xy(x + y)$
- a) $2xy + 2xy$
- b) $2x^2y + 2xy^2$
- c) $4xy$
- d) $4x^2y^2$

11. Jane's first three algebra test grades were 75, 88 and 90. If she wants to maintain an average of at least 85, what is the *lowest* grade she can make on the next test?

- a) 88
- b) 87
- c) 86
- d) 85

12. If (x, y) is in Quadrant II, then what are the signs of x and y ?

- a) x is negative and y is negative
- b) x is positive and y is positive
- c) x is negative and y is positive
- d) x is positive and y is negative

13. Find the slope of the line that passes through the points $(-2, 3)$ and $(0, -1)$.

- a) -2
- b) $-\frac{1}{2}$
- c) $\frac{1}{2}$
- d) 2

14. Write $2x - 3y = 6$ in slope-intercept form.

- a) $y = \frac{2}{3}x - 2$
- b) $y = -\frac{2}{3}x + 2$
- c) $x = \frac{3}{2}y + 3$
- d) $x = \frac{3}{2}y - 3$

15. Solve: $y = -2x - 4$
 $y = -x - 2$

- a) $(0, -2)$
- b) $(0, 2)$
- c) $(-2, 0)$
- d) $(-2, 2)$

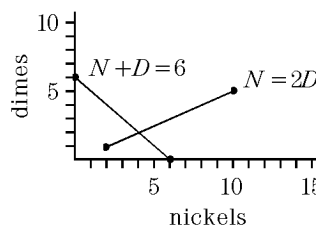
16. Factor: $x^2 - 16x + 48$

- a) $(x + 12)(x + 4)$
- b) $(x + 6)(x + 8)$
- c) $(x - 6)(x - 8)$
- d) $(x - 12)(x - 4)$

17. On a recent 140-mile trip, Kelly's car used 5 gallons of gasoline. At this rate, how far could her car travel on 12 gallons of gasoline?

- a) 420 miles
- b) 336 miles
- c) 312 miles
- d) 280 miles

18. The two line segments in the graph were derived from the information that John has a total of 6 coins in nickels and dimes ($N + D = 6$) and that the number of nickels is twice the number of dimes ($N = 2D$).



How many nickels and how many dimes does John have?

- a) 1 nickel and 5 dimes
- b) 2 nickels and 4 dimes
- c) 3 nickels and 3 dimes
- d) 4 nickels and 2 dimes

19. Zara used an automatic grapher to solve the equation $x^2 + 4x - 12 = 0$. Which of the following statements is *not* true?

- a) The y -intercept is the solution to the equation.
- b) The graph of $y = x^2 + 4x - 12$ has two x -intercepts.
- c) The graph of $y = x^2 + 4x - 12$ has one y -intercept.
- d) The solutions to the equation are -6 or 2 .

20. The sum of two numbers is 60 and their difference is 4. Find the larger number.

- a) 26
- b) 28
- c) 32
- d) 34

Answer List

- | | | |
|-------|-------|-------|
| 1. d | 2. b | 3. c |
| 4. d | 5. b | 6. b |
| 7. c | 8. c | 9. b |
| 10. b | 11. b | 12. c |
| 13. a | 14. a | 15. c |
| 16. d | 17. b | 18. d |
| 19. a | 20. c | |
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Catalog List

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|----------------|----------------|---------------|
| 1. NC5 DE 44 | 2. NC5 DA 2 | 3. NC5 DA 16 |
| 4. NC5 DA 36 | 5. NC5 DH 34 | 6. NC5 DB 45 |
| 7. NC5 DB 54 | 8. NC5 DG 25 | 9. NC5 DC 12 |
| 10. NC5 DG 34 | 11. NC5 DC 136 | 12. NC5 DD 15 |
| 13. NC5 DE 34 | 14. NC5 DE 48 | 15. NC5 DF 30 |
| 16. NC5 DG 100 | 17. NC5 DH 22 | 18. NC5 DF 2 |
| 19. NC5 DI 38 | 20. NC5 DF 49 | |

Answer by filling in the appropriate bubbles. Please use a #2 pencil. Good luck.

- Ⓐ Ⓑ Ⓒ Ⓓ 1. The video store has 600 videos for rent. Of these, 120 are comedies. What fraction shows the videos that are *not* comedies?

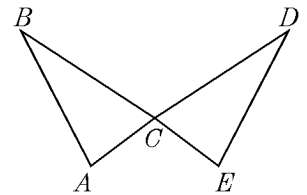
- a) $\frac{1}{50}$ b) $\frac{4}{5}$ c) $\frac{1}{5}$ d) $\frac{1}{30}$

- Ⓐ Ⓑ Ⓒ Ⓓ 2. Molly has 420 centimeters of colored string to make bracelets. She needs 120 centimeters of string for each bracelet. What is the *most* bracelets Molly can make with the string she has?

- a) 1 b) 2 c) 3 d) 4

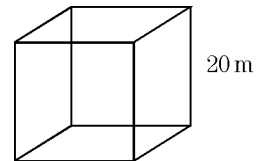
- Ⓐ Ⓑ Ⓒ Ⓓ 3. In the figure, $\triangle ABC$ is congruent to $\triangle CDE$. Which side of $\triangle CDE$ corresponds to \overline{AC} ?

- a) \overline{AD} b) \overline{CD} c) \overline{DE} d) \overline{CE}



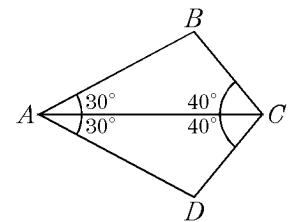
- Ⓐ Ⓑ Ⓒ Ⓓ 4. What is the volume of this cube?

- a) 60 m^3 b) 160 m^3 c) 400 m^3 d) $8,000\text{ m}^3$



- Ⓐ Ⓑ Ⓒ Ⓓ 5. Which of these statements would be *most* useful to prove the two triangles are congruent using the ASA theorem?

- a) The sum of the interior measures of a triangle is 180° .
 b) Every angle has exactly one bisector.
 c) Angle B is congruent to angle D .
 d) Segment AC is congruent to segment AC .



- Ⓐ Ⓑ Ⓒ Ⓓ 6. Simplify: $4\sqrt{6} - \sqrt{54} - 2\sqrt{24}$

- a) $-5\sqrt{6}$ b) $-3\sqrt{6}$ c) $3\sqrt{6}$ d) $5\sqrt{6}$

- Ⓐ Ⓑ Ⓒ Ⓓ 7. Simplify: $(a + 2)(a - 2)$

- a) $a^2 - 2a - 4$ b) $a^2 - 4$ c) $a^2 + 4$ d) $a^2 + 2a + 4$

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Math 1B End-of-Year Review Quiz Mr. Cartwright 1/20/99

Answer List

- | | | |
|------|------|------|
| 1. b | 2. c | 3. d |
| 4. d | 5. d | 6. b |
| 7. b | | |
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Catalog List

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|--------------|--------------|--------------|
| 1. NC5 AA 17 | 2. NC5 AE 5 | 3. NC5 BB 8 |
| 4. NC5 BD 16 | 5. NC5 CB 23 | 6. NC5 DB 59 |
| 7. NC5 DG 38 | | |