

Final Exam Math 7 2019

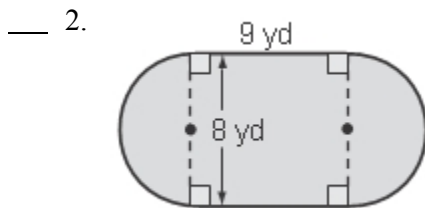
Indicate the answer choice that best completes the statement or answers the question.

The spinner shown is spun once. Find each probability. Write each answer as a fraction, a decimal, and a percent.



- ___ 1. $P(C)$
- a. $\frac{5}{6}$, ≈ 0.83 , $\approx 83\%$
 - b. $\frac{1}{5}$, $= 0.20$, $= 20\%$
 - c. $\frac{1}{6}$, ≈ 0.17 , $\approx 17\%$
 - d. $\frac{1}{3}$, ≈ 0.3 , $\approx 33\%$

Find the area of the figure. Round to the nearest tenth if necessary.

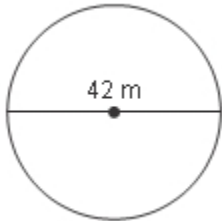


- a. 72 yd^2
- b. 122.3 yd^2
- c. 273 yd^2
- d. 97.1 yd^2

Final Exam Math 7 2019

Find the circumference of the circle. Use 3.14 or $\frac{22}{7}$ for π . Round to the nearest tenth if necessary.

___ 3.



- a. 21 m
- b. 132 m
- c. 264 m
- d. 66 m

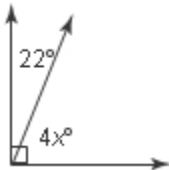
___ 4.



- a. 25.1 yd
- b. 50.2 yd
- c. 8 yd
- d. 12.6 yd

ALGEBRA Find the value of x in each figure.

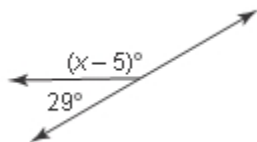
___ 5.



- a. 17
- b. 4
- c. 39.5
- d. 70

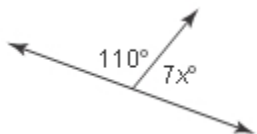
Final Exam Math 7 2019

___ 6.



- a. 34
- b. 66
- c. 156
- d. 151

___ 7.



- a. 10
- b. 110
- c. 70
- d. 12

Evaluate each expression if $a = 4.1$, $b = 5.7$, and $c = 0.3$.___ 8. $10 - (a + b)$

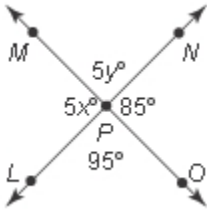
- a. 19.8
- b. 0.2
- c. 4
- d. 11.6

___ 9. $a + b - c$

- a. 9.8
- b. 10.1
- c. 9.5
- d. 10

Final Exam Math 7 2019

Use the figure below to answer the questions.

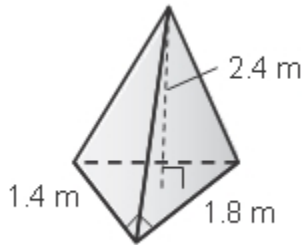


- ___ 10. Find the value of y .
- 17
 - 95
 - 19
 - 5
- ___ 11. Name two angles that are adjacent.
- $\angle MPL$ and $\angle NPO$
 - $\angle OPL$ and $\angle LPM$
 - $\angle MPN$ and $\angle LPO$
 - $\angle MPO$ and $\angle LPN$
- ___ 12. Name two angles that are vertical.
- $\angle MPN$ and $\angle NPO$
 - $\angle MPL$ and $\angle NPO$
 - $\angle LPM$ and $\angle MPN$
 - $\angle OPL$ and $\angle LPM$
- ___ 13. Find the value of x .
- 17
 - 19
 - 85
 - 5

Final Exam Math 7 2019

Find the volume of the pyramid. Round to the nearest tenth if necessary.

___ 14.



- a. 1.0 m^3
- b. 1.3 m^3
- c. 3.4 m^3
- d. 3.0 m^3

Subtract.

___ 15. $(-8x + 2) - (-5x + 7)$

- a. $-3x - 5$
- b. $-3x + 9$
- c. $-13x + 9$
- d. $-13x - 5$

___ 16. $(9x + 7) - (x + 3)$

- a. $8x + 4$
- b. $10x + 10$
- c. $10x + 4$
- d. $8x + 10$

Eight cards are marked 3, 4, 5, 6, 7, 8, 9, and 10 such that each card has exactly one of these numbers. A card is picked without looking. Find each probability. Write each answer as a fraction, a decimal, and a percent.

___ 17. $P(\text{not } 5 \text{ and not } 10)$

- a. $\frac{5}{8}$, 0.625, 62.5%
- b. $\frac{1}{4}$, 0.25, 25%
- c. $\frac{7}{8}$, 0.875, 87.5%
- d. $\frac{3}{4}$, 0.75, 75%

Final Exam Math 7 2019**Add.**

- ___ 18. $(1.3x + 2.4) + (-6.1x - 3.2)$
a. $-4.8x - 0.8$
b. $7.4x - 5.6$
c. $-4.8x - 5.6$
d. $4.8x - 0.8$
- ___ 19. $(9x + 7) + (x + 3)$
a. $9x + 10$
b. $8x + 4$
c. $10x + 10$
d. $10x + 7$
- ___ 20. $(-6x + 3) + (5x - 4)$
a. $-11x + 7$
b. $-x - 1$
c. $-6x - 1$
d. $-x + 1$

Describe the relationship between the terms in each arithmetic sequence. Then write the next three terms in each sequence.

- ___ 21. 0.4, 0.8, 1.2, 1.6, ...
a. 1.4 is added to each term; 3.0, 4.4, 5.8
b. 0.04 is added to each term; 1.64, 1.68, 1.72
c. 0.4 is added to each term; 2.0, 2.4, 2.8
d. 4 is added to each term; 4.6, 8.6, 12.6
- ___ 22. 1, 3, 5, 7, ...
a. 2 is added to each term; 11, 13, 15
b. 3 is added to each term; 10, 13, 16
c. 2 is added to each term; 9, 11, 13
d. 1 is added to each term; 8, 9, 10

Name the property shown by each statement.

- ___ 23. $1 \cdot (a + 3) = a + 3$
a. Associative Property of Addition
b. Multiplicative Identity
c. Distributive Property
d. Additive Identity

Final Exam Math 7 2019

- ___ 24. $(ab)c = c(ab)$
- Multiplicative Identity
 - Associative Property of Multiplication
 - Distributive Property
 - Commutative Property of Multiplication

- ___ 25. $m(nr) = (mn)r$
- Associative Property of Multiplication
 - Commutative Property of Multiplication
 - Distributive Property
 - Identity Property of Multiplication

Evaluate each expression if $r = 5$, $s = 2$, $t = 7$, and $u = 1$.

- ___ 26. $s + 7$
- 14
 - 12
 - 8
 - 9

- ___ 27. $9 - u$
- 7
 - 8
 - 5
 - 2

- ___ 28. $\frac{(3+u)^2}{8}$
- $\frac{1}{4}$
 - 16
 - 8
 - 2

- ___ 29. $\frac{s}{2}$
- $3\frac{1}{2}$
 - 4
 - 1
 - $\frac{1}{2}$

Final Exam Math 7 2019

___ 30. $3t + 1$

- a. 22
- b. 16
- c. 4
- d. 7

___ 31. $3u^2$

- a. 75
- b. 147
- c. 3
- d. 12

___ 32. $5r - 4$

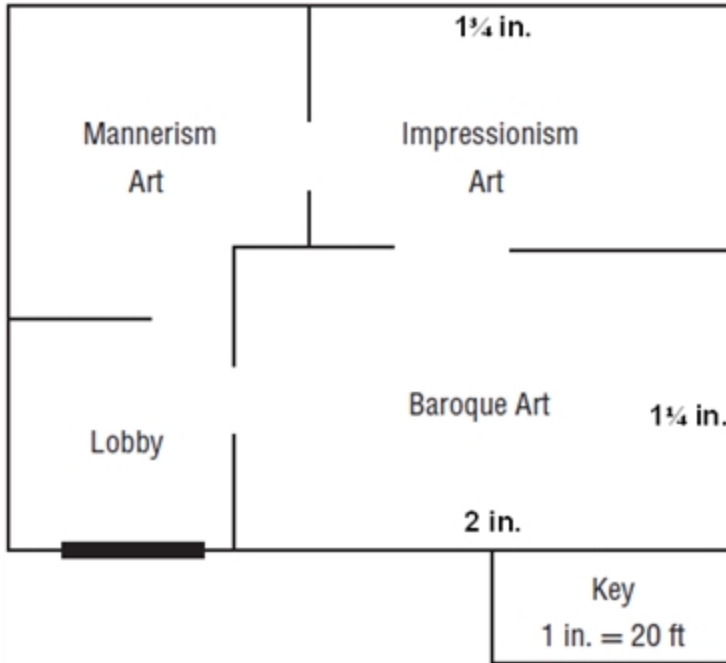
- a. 21
- b. 31
- c. 1
- d. 6

___ 33. $2t^2 - 18$

- a. 116
- b. 178
- c. 32
- d. 80

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Use the diagram of a section of the art museum shown to solve.



- ___ 34. Find the scale factor for this blueprint.
- $\frac{1}{360}$
 - $\frac{1}{24}$
 - $\frac{1}{240}$
 - $\frac{1}{100}$
- ___ 35. What is the actual length of the *Impressionism Art* room?
- 45 ft
 - 40 ft
 - 25 ft
 - 35 ft

Use the Distributive Property to evaluate each expression.

- ___ 36. $4(12 + 3)$
- 75
 - 24
 - 60
 - 51

Final Exam Math 7 2019

Draw a top, a side, and a front view of each solid.

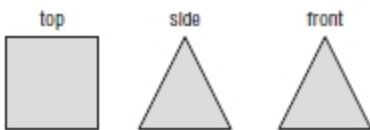
___ 37.



a.



b.



c.



d.



Name each angle in four ways. Then classify the angle as *acute*, *right*, *obtuse*, or *straight*.

___ 38.



- a. $\angle 1, \angle B, \angle CBA, \angle ABC$; obtuse
- b. $\angle 1, \angle B, \angle CBA, \angle ABC$; right
- c. $\angle 1, \angle B, \angle CBA, \angle ABC$; straight
- d. $\angle 1, \angle B, \angle CBA, \angle ABC$; acute

Final Exam Math 7 2019**Solve the equation. Check your solution.**

___ 39. $6 = g + 8$

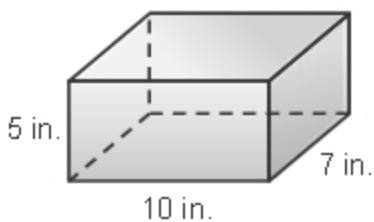
- a. 14
- b. 48
- c. 2
- d. -2

___ 40. $m - 7 = 1$

- a. 6
- b. -6
- c. -8
- d. 8

Find the volume of the prism. Round to the nearest tenth if necessary.

___ 41.



- a. 50 in^3
- b. 35 in^3
- c. 70 in^3
- d. 350 in^3

Use the Distributive Property to rewrite each expression.

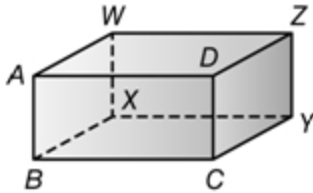
___ 42. $-7(5 - n)$

- a. $-35 + 7n$
- b. $5 + 7n$
- c. $-35 - n$
- d. $35 - 7n$

Final Exam Math 7 2019

Identify each figure. Then name the bases, faces, edges, and vertices.

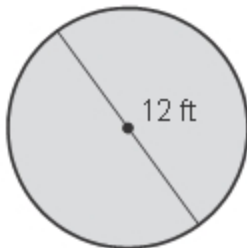
___ 43.



- The figure is a rectangular prism. The base is $XYCB$. The faces are $XYCB$, $ZYCD$, $DCBA$, $AWXB$, $WZYX$, and $WZDA$. The edges are \overline{WA} , \overline{WZ} , \overline{ZD} , \overline{DA} , \overline{WX} , \overline{ZY} , \overline{DC} , \overline{AB} , \overline{XY} , \overline{YC} , \overline{CB} , \overline{BX} . The vertices are W , Z , D , A , Y , C , B , and X .
- The figure is a rectangular prism. The base is $XYCB$. The faces are $XYCB$, $ZYCD$, $DCBA$, $AWXB$, $WZYX$, and $WZDA$. The edges are \overline{WA} , \overline{WZ} , \overline{ZD} , \overline{DA} , \overline{WX} , \overline{ZY} , \overline{DC} , \overline{AB} , \overline{XY} , \overline{YC} , \overline{CB} , \overline{BX} . The vertices are W , Z , D , A , Y , C , and B .
- The figure is a cube. The base is $XYCB$. The faces are $XYCB$, $ZYCD$, $DCBA$, $AWXB$, $WZYX$, and $WZDA$. The edges are \overline{WA} , \overline{WZ} , \overline{ZD} , \overline{DA} , \overline{WX} , \overline{ZY} , \overline{DC} , \overline{AB} , \overline{XY} , \overline{YC} , \overline{CB} , \overline{BX} . The vertices are W , Z , D , A , Y , C , B , and X .
- The figure is a rectangular prism. The base is $XYCB$. The faces are $XYCB$, $ZYCD$, $DCBA$, $AWXB$, and $WZYX$. The edges are \overline{WA} , \overline{WZ} , \overline{ZD} , \overline{DA} , \overline{WX} , \overline{ZY} , \overline{DC} , \overline{AB} , \overline{XY} , \overline{YC} , \overline{CB} , \overline{BX} . The vertices are W , Z , D , A , Y , C , B , and X .

Find the area of the circle. Round to the nearest tenth. Use 3.14 or $\frac{22}{7}$ for π .

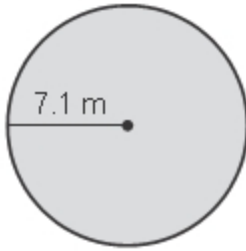
___ 44.



- 37.7 ft^2
- 452.2 ft^2
- 113 ft^2
- 18.8 ft^2

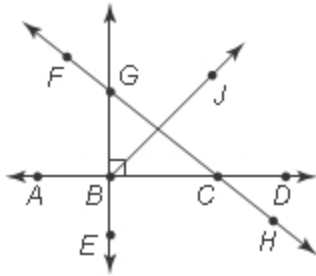
Final Exam Math 7 2019

___ 45.



- a. 158.3 m^2
- b. 22.3 m^2
- c. 44.6 m^2
- d. 633.1 m^2

Use the figure below to name the following.



- ___ 46. two right angles
 - a. $\angle ABE$ and $\angle GBC$
 - b. $\angle ABD$ and $\angle EBG$
 - c. $\angle DCH$ and $\angle JBD$
 - d. $\angle FGE$ and $\angle ACH$

- ___ 47. two acute angles
 - a. $\angle ABE$ and $\angle GBC$
 - b. $\angle FGE$ and $\angle ACH$
 - c. $\angle ABD$ and $\angle EBG$
 - d. $\angle DCH$ and $\angle JBD$

- ___ 48. two obtuse angles
 - a. $\angle ABD$ and $\angle EBG$
 - b. $\angle ABE$ and $\angle GBC$
 - c. $\angle DCH$ and $\angle JBD$
 - d. $\angle FGE$ and $\angle ACH$

Final Exam Math 7 2019

Solve the equation. Check your solution.

___ 49. $16b = 32$

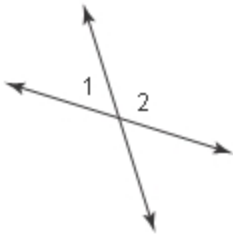
- a. 192
- b. 48
- c. 16
- d. 2

___ 50. $\frac{1}{2} = 2$

- a. 16
- b. 10
- c. $\frac{1}{4}$
- d. 6

Classify each pair of angles as *complementary*, *supplementary*, or *vertical*. If there is no relationship, write *none*.

___ 51.



- a. complementary
- b. supplementary
- c. vertical
- d. none of these

A number cube is rolled 24 times and lands on 2 four times and on 6 three times.

___ 52. Find the experimental probability of landing on a 2.

- a. $\frac{1}{12}$
- b. $\frac{1}{4}$
- c. $\frac{1}{6}$
- d. $\frac{1}{8}$

Final Exam Math 7 2019

Find the missing measure in each triangle with the given angle measures.

- ___ 53. Find the third angle of a right triangle if one of the angles measures 24° .
- a. 76°
 - b. 86°
 - c. 90°
 - d. 66°

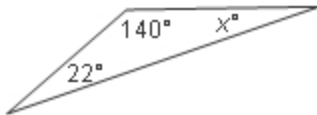
Find the value of x .

- ___ 54.



- a. 52
- b. 42
- c. 48
- d. 58

- ___ 55.



- a. 28
- b. 12
- c. 8
- d. 18

Identify the terms, like terms, coefficients, and constants in each expression.

- ___ 56. $4b + 7b + 5$
- a. terms: $4b, 7b, 5$; like terms: $4b, 7b$; coefficients: 4, 7; constant: 5
 - b. terms: $4b, 7b, 5$; like terms: $4b, 7b$; coefficient 5; constants: 4, 7
 - c. terms: $4b, 7b$; like terms: $4b, 7b$; coefficients: 4, 7; constant: 5
 - d. terms: $4b, 7b, 5$; like terms: $4b, 7b$; coefficients: 4, 5, 7
- ___ 57. $-5x + 4 - x - 1$
- a. terms: $-5x, 4, -x, -1$; like terms: $-5x, -x; 4, -1$; coefficients: -5, -1; constants: -1
 - b. terms: $-5x, 4, -x, -1$; like terms: $-5x, -x; 4, -1$; coefficients: -5, -1; constants: 4, -1
 - c. terms: $-5x, 4, -x$; like terms: $-5x, -x; 4, -1$; coefficients: -5, -1; constants: 4, -1
 - d. terms: $-5x, 4, -x, -1$; like terms: $-5x, -x; 4, -1$; coefficients: 4, -1; constants: -5, -1

Final Exam Math 7 2019

Find the radius or diameter of the circle with the given dimensions.

- ___ 58. $d = 18$ in.
- a. 12 in.
 - b. 36 in.
 - c. 56.5 in.
 - d. 9 in

A spinner marked with four sections blue, green, yellow, and red was spun 100 times. The results are shown in the table.

Section	Frequency
Blue	14
Green	10
Yellow	8
Red	68

- ___ 59. If the spinner is spun 50 more times, how many of these times would you expect the pointer to land on blue?
- a. 34 times
 - b. 7 times
 - c. 5 times
 - d. 4 times

Find the GCF of each pair of monomials.

- ___ 60. 20, $45x$
- a. 5
 - b. 15
 - c. $5x$
 - d. 10

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Answer Key

1. c
2. b
3. b
4. a
5. a
6. c
7. a
8. b
9. c
10. c
11. b
12. b
13. a
14. a
15. a
16. a
17. d
18. a
19. c
20. b
21. c
22. c
23. b
24. d
25. a
26. d

Final Exam Math 7 2019

27. b

28. d

29. c

30. a

31. c

32. a

33. d

34. c

35. d

36. c

37. a

38. c

39. d

40. d

41. d

42. a

43. a

44. c

45. a

46. a

47. d

48. d

49. d

50. a

51. b

52. c

53. d

54. c

Name: _____ Class: _____ Date: _____

Ver: 2

Final Exam Math 7 2019

55. d

56. a

57. b

58. d

59. b

60. a

Final Exam Math 7 2019**Scramble Map**

Question #	Original Question #
1	57
2	54
3	51
4	50
5	39
6	41
7	40
8	10
9	9
10	33
11	31
12	30
13	32
14	56
15	24
16	23
17	58
18	22
19	20
20	21
21	12
22	11
23	13
24	14
25	15
26	1
27	2
28	8
29	7
30	4
31	5
32	3
33	6
34	46
35	45
36	16
37	47
38	34
39	26
40	27
41	55
42	17
43	48
44	53
45	52
46	36
47	35
48	37
49	28
50	29

Name: _____ Class: _____ Date: _____

Ver: 2

Final Exam Math 7 2019

51	38
52	59
53	44
54	42
55	43
56	18
57	19
58	49
59	60
60	25