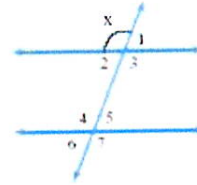
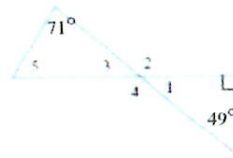


7. The figure to the right shows two parallel lines intersected by a transversal. Let $x = 109^\circ$. Find the measure of each of the other seven angles.



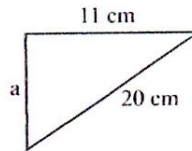
- $m\angle 1 =$ _____ $^\circ$
- $m\angle 2 =$ _____ $^\circ$
- $m\angle 3 =$ _____ $^\circ$
- $m\angle 4 =$ _____ $^\circ$
- $m\angle 5 =$ _____ $^\circ$
- $m\angle 6 =$ _____ $^\circ$
- $m\angle 7 =$ _____ $^\circ$

8. Find the measures of angles 1 through 5 in the figure shown.



- $m\angle 1 =$ _____ $^\circ$
- $m\angle 2 =$ _____ $^\circ$
- $m\angle 3 =$ _____ $^\circ$
- $m\angle 4 =$ _____ $^\circ$
- $m\angle 5 =$ _____ $^\circ$

9. Use the Pythagorean Theorem to find the missing length in the right triangle.

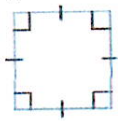


The missing length is _____ (1) _____ (Round to one decimal place as needed.)

- (1) cm^2 .
- cm .
- m .

10. Which of these quadrilaterals do not have four sides of equal length?
Name these quadrilaterals.

I.



II.



III.



IV.



V.



Choose the correct answer below.

- A. III (trapezoid), I (square), II (parallelogram)
 B. III (trapezoid), V (rhombus), II (parallelogram)
 C. III(trapezoid), IV (rectangle), and II (parallelogram)
 D. III (trapezoid), IV (rectangle), I (square)

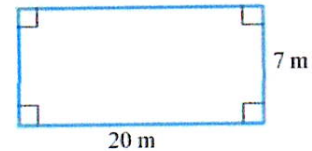
11. Find the sum of the measures of the angles of a eight-sided polygon.

_____ °

12. A school playground is in the shape of a rectangle 700 feet long and 200 feet wide. If fencing costs \$20 per yard, what will it cost to place fencing around the playground?

\$ _____

13. Use the formulas developed in this section to find the area of the figure.

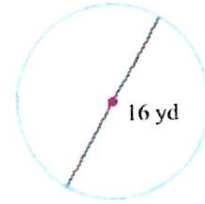


A = _____ (1) _____

- (1) m
 m²
 m³

14.

Find the circumference and area of the circle. Express answers in terms of π and then round to the nearest tenth.



Find the circumference in terms of π .

C = _____ (1) _____ (Type an exact answer in terms of π .)

Find the circumference rounded to the nearest tenth.

C = _____ (2) _____

Find the area in terms of π

A = _____ (3) _____ (Type an exact answer in terms of π .)

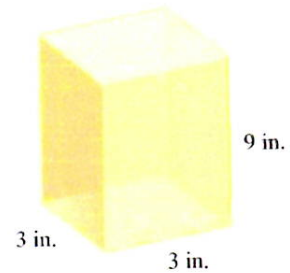
Find the area rounded to the nearest tenth.

A = _____ (4) _____

- | | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| (1) <input type="radio"/> yd | (2) <input type="radio"/> yd | (3) <input type="radio"/> yd | (4) <input type="radio"/> yd |
| <input type="radio"/> yd ² | <input type="radio"/> yd ² | <input type="radio"/> yd ² | <input type="radio"/> yd ² |
| <input type="radio"/> yd ³ | <input type="radio"/> yd ³ | <input type="radio"/> yd ³ | <input type="radio"/> yd ³ |

15.

Find the volume of the figure.



The volume of the figure is _____ (1) _____.

- (1) in.
 in.²
 in.³

16. A restaurant offers the following limited lunch menu.

Main Courses	Ham, Chicken, Fish
Vegetables	Broccoli, Carrots, Potatoes
Beverages	Coffee, Tea, Milk
Desserts	Ice Cream, Brownies

If one item is selected from each of the four groups, in how many ways can a meal be ordered?

There are _____ ways a meal can be ordered.

17. In a different plan for area codes, the first digit could be any number from 4 through 8, the second digit was either 5 or 6, and the third digit could be any number except 2, 4, or 7. With this plan, how many different area codes are possible?

There are _____ possible area codes.

18. A camp counselor and eight campers are to be seated along a picnic bench. In how many ways can this be done if the counselor must be seated in the middle and a camper who has a tendency to engage in food fights must sit to the counselor's immediate left?

There are _____ way(s) this can be done.

19. Evaluate the factorial expression.

$$(6 - 3)!$$

20. Use the formula for ${}_nP_r$ to evaluate the following expression.

$${}_9P_5$$

The answer is _____.

21. Determine whether the following problem involves a permutation or combination. (It is not necessary to solve the problem.)

A medical researcher needs 42 people to test the effectiveness of an experimental drug. If 88 people have volunteered for the test, in how many ways can 42 people be selected?

- Permutation
 Combination
-

22. You volunteer to help drive children at a charity event to the zoo, but you can fit only 7 of the 14 children present in your van. How many different groups of 7 children can you drive?

How many different groups of 7 children can you drive?

23. A fair coin is tossed three times in succession. The set of equally likely outcomes is {HHH, HHT, HTH, THH, HTT, THT, TTH, TTT}. Find the probability of getting exactly zero tails.

The probability of getting zero tails is _____.
(Type an integer or a simplified fraction.)

24. A single die is rolled twice. The 36 equally-likely outcomes are shown to the right.

Find the probability of getting a first number that is greater than the second number.

		Second Roll					
		1	2	3	4	5	6
First Roll	1	(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
	2	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
	3	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
	4	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
	5	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
	6	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

The probability of getting a first number that is greater than the second number is _____.
(Type an integer or a simplified fraction.)

25. You are dealt one card from a 52-card deck. Find the probability that you are not dealt a heart.

The probability is _____. (Type an integer or a fraction. Simplify your answer.)

26. A questionnaire was given to students in an introductory statistics class during the first week of the course. One question asked, "How stressed have you been in the last $2\frac{1}{2}$ weeks, on a scale of 0 to 10, with 0 being not at all stressed and 10 being as stressed as possible?" The students' responses are shown in the frequency distribution below. How many students were involved in the study?

¹ Click the icon to view the frequency distribution.

_____ students

1: Frequency Distribution

Stress Rating	Frequency
0	6
1	1
2	3
3	11
4	20
5	20
6	13
7	25
8	21
9	12
10	16

27. Find the median for the following group of data items.

11, 8, 7, 6, 12, 9, 5, 7

The median is _____. (Round to the nearest tenth as needed.)

28. Find the mode(s) for the data items in the given frequency distribution.

Score, x	1	2	3	4	5	6	7	8
Frequency, f	3	3	5	4	2	3	1	1

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. The mode(s) is/are _____. (Use a comma to separate answers as needed.)
- B. There is no mode.