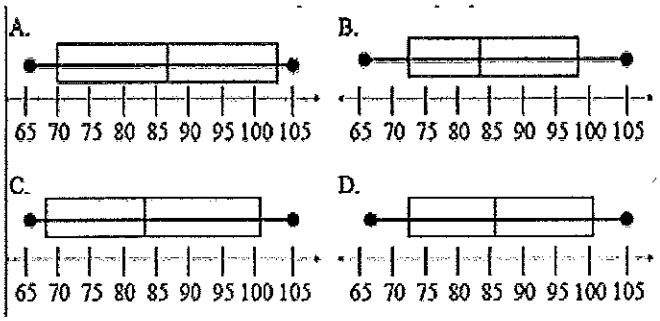
1 A. What is the value of the expression below?

$$6 \div 2 + 24 \bullet 3$$

A. 81 B. 78
C. 15 D. 75

2 A. The following is an ordered list of monthly normal high temperatures for Phoenix, AZ.
66,66,70,74,75,83,84,93,97,99,103,105
Which box-and-whisker plot best displays the data?



3 A. What is the solution to the inequality below?

$$-4x \le 3(x+3)+5$$

A. $x \le -2$ B. $x \ge -2$
C. $x \ge -\frac{1}{2}$ D. $x \le -\frac{1}{2}$

4 A. What is the solution to the equation below?

$$3(x - 4) = 3(5x - 6)$$

A. $x = -3$ B. $x = 9$
C. $x = 2$ D. $x = \frac{1}{2}$

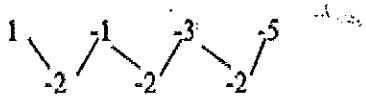
5 A. If you dilated a figure, with a scale of ½ what would happen to the figure?

A. Nothing
B. The area of the figure would increase.
C. The area of the figure would decrease.
D. The figure would move up one and to the right two.

6 A. Sally wrote the number pattern shown below

1,-1,-3,-5,…

She noticed another pattern when she found that the difference between numbers is 2, as shown below.



If the difference continues decrease by 2, what will be the next two terms of the original pattern?

A. 7, 9 B. -3, -1
C. -6, -8 D. -7, -9

7 A. Evaluate $3x - 2y$, when $x = 4$ and $y = -5$

A. −24 B. −22
C. 22 D. 24

8 A. What value of x would make the following proportion true?

$$\frac{4}{2x+2} = \frac{4}{3}$$

A. $\frac{1}{2}$ B. 2
C. 5 D. 10

9 A. What is the midpoint of the segment with endpoint coordinates (5,3) and (13, 9)?

A. $(9,6)$ B. $(4,3)$
C. $(-5,-4)$ D. $(-4,-3)$

10 A. Which of the following is always true?

A. A kite is a rectangle.
B. A kite is a quadrilateral.
C. A kite is a parallelogram.
D. A kite is a rhombus.

11 A. Your club is selling T-shirts for $8.00 each. If the shirts cost your club $4.00 each plus a $100 set up fee, how many shirts will you have to sell before your club starts making money?

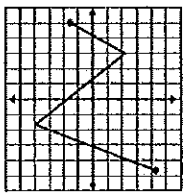
A. You start making money right away
B. 12
C. 13
D. 25

12 A. What is the x-intercept for the graph of the equation $3x-4y=-5$?

A. $-\frac{5}{4}$ B. $\frac{5}{4}$

C. $-\frac{3}{5}$ D. $-\frac{5}{3}$

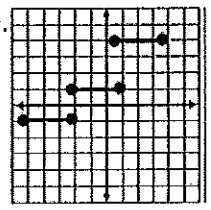
13 A. Which of the following is a function of x?

A. 

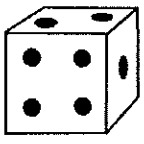
B.

x	y
1	3
2	6
3	9
4	12
5	3

C. {(2,3), (4,5), (2,6)}

D. 

14 A. The cube shown has 1 through 6 dots on its faces. When the cube is tossed twice, what is the probability that the sum of the dots of both rolls will be 12?



A. $\frac{1}{6}$ B. 1

C. 0 D. $\frac{1}{36}$

15 A. What is the value of the expression below?

$$22-5\left[4-6\left(8-5\right)\right]$$

A. –43 B. 69

C. 92 D. –46

16 A. The n^{th} term of the linear pattern defined by the table is given by which expression?

3	4	5	6	n
9	16	25	36	?

A. $3n$ B. $n+5$

C. $n-2$ D. n^2

17 A. Speedy rentals will rent a jet ski for $5.00 plus $13.00 per hour. Which equation expresses C, the cost of renting a jet ski and riding it for h hours?

A. $C=5h+13$ B. $C=5+13h$

C. $C=13\left(5+h\right)$ D. $C=5\left(h+13\right)$

18 A. Which addition property is illustrated by the following statement?

$$10 + \left(8 + 5\right) = \left(10 + 8\right) + 5$$

A. Associative B. Identity

C. Reflective D. Closure

19 A. A cellular phone company offers a family plan. If you get 2 phones the total cost is $59.95 per month, if you get 3 phones the total cost is $79.95 per month, if you get 4 phones the total cost is $99.95 per month, and so on.

Based on this information, which of the following conjectures is reasonable?

A. If you get 5 phones the total cost would be $109.95 per month.
B. If you get 6 phones the total cost would be $139.95 per month
C. If you get 6 phones the total cost would be $149.95 per month
D. If you get 7 phones the total cost would be $169.95 per month

20. Simplify: $2x\left(3y + 4\right) + 5x$

A. $6xy - 3x$ B. $6xy + 5x - 8$

C. $6xy + 13x$ D. $6yx-4x^2+5x$

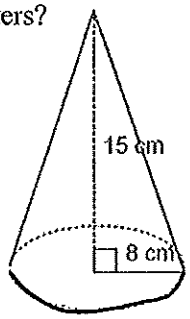
21. You and your 2 friends are going out for pizza. The total cost of the pizza and drinks is $29.72. About how much does each person need to contribute?

A. $9.00 B. $9.50

C. $10.00 D. $15.00

22 A. The right circular cone represented below has a base radius of 8 centimeters and a height of 15 centimeters. What is the volume of the right circular cone in cubic centimeters?

A. 320 cm^3
B. 960 cm^3
C. 320π cm^3
D. 960π cm^3



23 A. The Thunder football team scored the following points during the playoff games:

38, 36, 49, 38, 18

Which statement is true about the scores?

A. The mode is the same as the median.
B. The median is the same as the mean.
C. The range is the same as the mode.
D. The mode is the same as the mean.

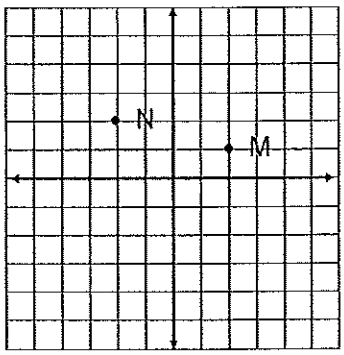
24 A. You and 5 of your friends are going out for pizza. You have $9.32 and your friends each have $7.15, $8.92, $9.88, $8.18 and $10.02.

If you're going to combine your money to buy pizza and drinks, which statement is most reasonable?

A. You have about $48 to spend.
B. You have about $53 to spend
C. You have about $58 to spend.
D. You have about $60 to spend.

25 A. What is the distance between points M (2, 1) and N $(-2,2)$ on the graph below?

A. $\sqrt{17}$
B. $3\sqrt{2}$
C. $\sqrt{8}$
D. $\sqrt{6}$



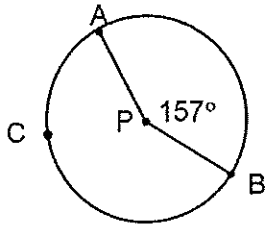
26 A. Which of the following is not true?

A. An equilateral triangle has exactly two congruent sides.
B. An equilateral triangle has two congruent sides.
C. An equilateral triangle has three congruent sides.
D. An equilateral triangle has three congruent angles.

27 A. Points A, B and C are on circle P.

What is the $m\overset{\frown}{AB}$?

A. 203°
B. 37°
C. 157°
D. 27°



28 A. Which pair of equations shares a solution?

A. $4x - 6 = 10$
$2(x - 5) = x - 16$

B. $4x - 6 = 10$
$x + 2(x - 4) = 16 - 3x$

C. $4x - 6 = 10$
$4x + 0 = 5(14 - x) - 16$

D. $4x - 6 = 10$
$2x + 7 = 22 - 3x$

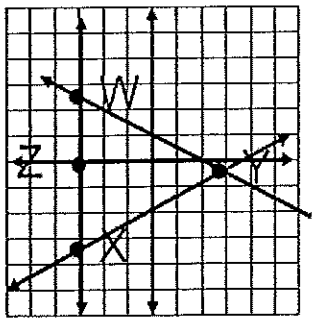
29 A. Solve the system of equations below.

$$x = -3$$

$$y = \frac{1}{2}x - 2$$

Which point on the graph below is the solution to the system of linear equations?

A. W $\left(-3, \frac{5}{2}\right)$
B. X $\left(-3, -\frac{7}{2}\right)$
C. Y $\left(3, -\frac{1}{2}\right)$
D. Z $(-3, 0)$



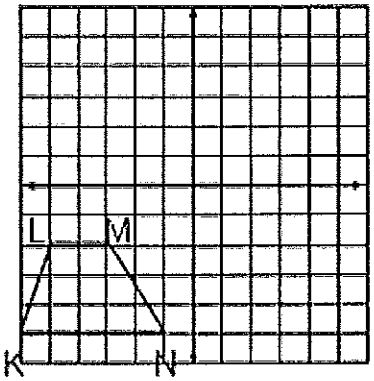
30 A. If the maximum hours you could work a week was 12 hours, based on the chart below how many jobs would you not be able to consider?

A. 1
B. 2
C. 3
D. 4

Business	Job	Location	Hour/week	Hourly pay
Cow Bar	ice cream server	Chandler Mall	10	$5.50
Bond's	filing clerk	Chandler Mall	12	$5.50
Food Stuff	stock clerk	Chandler Mall	15	$6.00
Lunch Bag	ice cream server	Fiesta Mall	20	$5.75
Shop-All	stock clerk	Fiesta Mall	10	$6.20
Great Lawns	yard worker	neighborhood	10	$9.00
Pouch's	dog walker	neighborhood	15	$5.00

31 A. If trapezoid KLMN shown below is reflected across the x-axis to form trapezoid K'L'M'N', what are apparent coordinates of M' ?

A. (3, 2)
B. (-3, -2)
C. (3, -2)
D. (-3, 2)



32 A. Which of the following represents a correct procedure for solving each given equation?

A. $-2x(x-5)=-12$
$2x+10=-12$
$2x=-22$
$x=-11$

B. $8(x+5)=-24$
$8x+40=-24$
$8x=16$
$x=2$

C. $5-2x=8x+25$
$5=10x+25$
$-20=10x$
$x=-2$

D. $7x-12=-2x+15$
$9x-12=15$
$9x=3$
$x=\frac{1}{3}$

33 A. The statements below are out of order.

W: If blitz, then kerd.
X: If mot, then det.
Y: If kerd, then mot.
Z: If toc, then blitz.

Which of the following puts the nonsensical if-then statements in logical order?

A. W Z X Y
B. Z W Y X
C. W Y X Z
D. Z X Y W

34 A. Which of these is equivalent to the equation below?

$$A=bh$$

A. $\frac{A}{b}=h$
B. $b=Ah$
C. $Ah=b$
D. $A-h=b$

35 A. The algorithm below is a step-by-step geometric procedure.

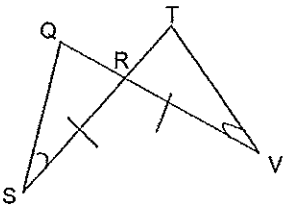
I. Divide the measure of the corresponding arc by three hundred sixty degrees
II. Multiply the answer from step I by two times pi, times the radius of the circle.

A. Finding the measure of a major arc.
B. Calculating the area of a sector.
C. Finding the measure of a minor arc.
D. Calculating the length of an arc.

36 A. Mr. Norris wants to draw a scaled drawing of his pool. His pool is 35 feet long and 15 feet wide. If he creates a scale drawing with a width of 12 inches, what should be the length?

A. 18 inches
B. 24 ½ inches
C. 28 inches
D. 32 inches

37 A. Which theorem of congruence should be used to prove $\Delta QRS \cong \Delta TRV$?



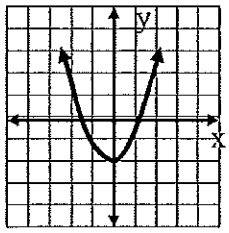
A. Side-Side-Side (SSS)
B. Angle-Angle-Side (AAS)
C. Side-Angle-Side (SAS)
D. Angle-Side-Angle (ASA)

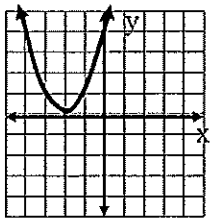
38 A. A customer is choosing a car at a car lot. There are 3 colors, 5 different body styles, and either an automatic or manual transmission from which to choose. Which of the following could be used to find how many different options in the cars are available?

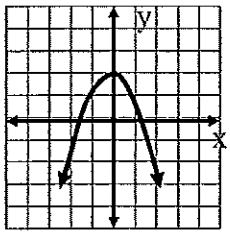
A. $3 \cdot 5 \cdot 2$
B. $3+5+3+2+1$
C. $3 \cdot 2 \cdot 1$
D. $3+2+1$

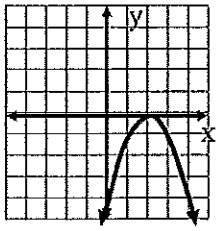
39 A. Which of the following represents the graph of the equation below?

$$y = x^2 - 2$$

A. 

B. 

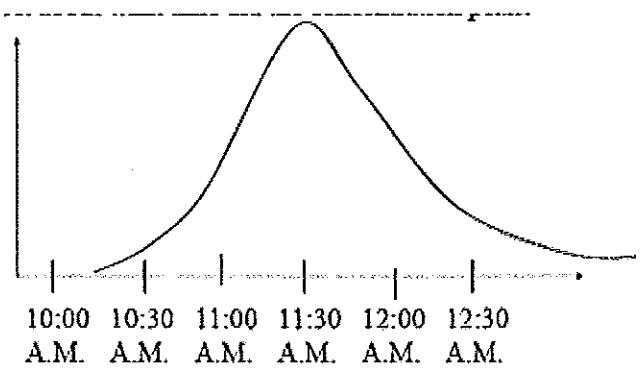
C. 

D. 

40 A. Johnny wants to determine the height of the flagpole at school. He drives a stake into the ground next to the flagpole so that 8 ft of the stake is above the ground. He measures the lengths of the shadows of the flagpole and the stake. The length of the flagpole's shadow is 48 ft and the length of the stake's shadow is 12 ft. What is the height of the flagpole?

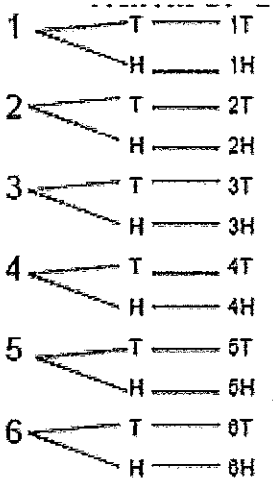
A. 26 feet
B. 32 feet
C. 36 feet
D. 64 feet

41 A. Chris took an aspirin at 10:00 AM The graph shows the concentration of aspirin in his bloodstream over time. At about what time did the concentration peak?



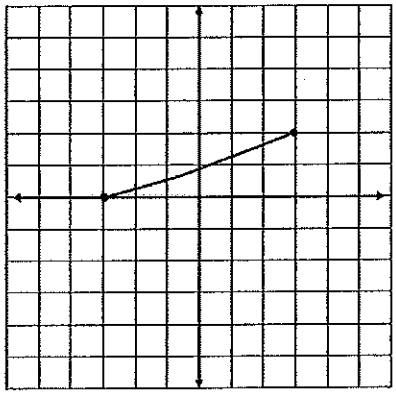
A. 10:00 A.M.
B. 11:00 A.M.
C. 11:30 A.M.
D. 12:30 A.M.

42 A. A die is rolled once, and a coin is tossed once. The following is a tree diagram that shows the different possible results. Determine the number of possible outcomes.



A. 16
B. 12
C. 8
D. 4

43 A. What is the domain of the relationship below?



A. $-3 \le y$
B. $0 \le y \le 2$
C. $0 \le x \le 3$
D. $-3 \le x \le 3$

44 A. The points scored by a school football team this season are:

6, 7, 11, 12, 22, 28, 28, 30, 33, 35

Which of the following stem-and-leaf plots correctly displays the data?

A.

1 | 1 means 11	
0	6,7
1	1,2
2	2, 8, 8
3	0, 3, 5

B.

Stem	Leaf
0	6, 7
1	1, 2
2	2, 8
3	0, 3, 5

C.

Stem	Leaf
0	3
1	1
2	1, 2
3	3
5	3
7	0
8	2,2

D.

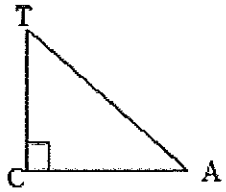
Stem	Leaf
0	3
1	1
2	1, 2
3	3
	4
	5
	6
	7
8	2. 2

3

45 A. Which of the following is an example of independent events?

A. Picking which two 6-sided die to roll out of 6 given to you.
B. Determining who will be the 2 captains on the football team.
C. Picking which 3 outfits to take with you on your weekend vacation.
D. Rolling a 6-sided die 2 times and getting a 5 both times.

46 A. Which of the following must be true for triangle CAT?



A. $CA + AT = CT$
B. $CA + TC < AT$
C. $CT + AT > CA$
D. $CA - AT = CT$

47 A. What is the simplified form of the expression below?

$$\sqrt{36x^{36}y^4z^{16}}$$

A. $6x^{18}y^2z^8$ B. $6x^6y^2z^4$
C. $18x^6y^2z^4$ D. $18x^{18}y^2z^8$

48 A. Which of the following transformations always preserve the dimensions of a figure?

I. Translation
II. Rotation
III. Reflection
IV. Dilation

A. I, II, and III B. I, II, and IV
C. I, III, and IV D. II, III, and IV

49 A. PR has endpoints P $(5,6)$ and R $(-6,-2)$. What is the midpoint of PR?

A. $\left(-\frac{3}{2},-1\right)$ B. $\left(-\frac{1}{2},2\right)$
C. $\left(\frac{9}{2},5\right)$ D. $\left(1\frac{1}{2},-4\right)$

50 A. Laura uses the airport shuttle to travel the 25 miles from her home to the airport. If the shuttle charges \$7.50 plus \$0.10 per mile, what would be Mary's cost for a one-way trip?

A. \$7.50 B. \$10.00
C. \$12.50 D. \$15.00

Answer test A 1 - 25

1. D 2. B 3. B 4. D 5. C 6. D 7. C 8. A 9. A 10. B
11. D 12. D 13. B 14. D 15. C 16. D 17. B 18. A
19. B 20. C 21. C 22. C 23. A 24. B 25. A

Answer test A 26 - 50

26. A 27. C 28. B 29. B 30. C 31. D 32. C 33. B
34. A 35. D 36. C 37. D 38. A 39. A 40. B 41. C
42. B 43. D 44. A 45. D 46. C 47. A 48. A 49. B
50. B