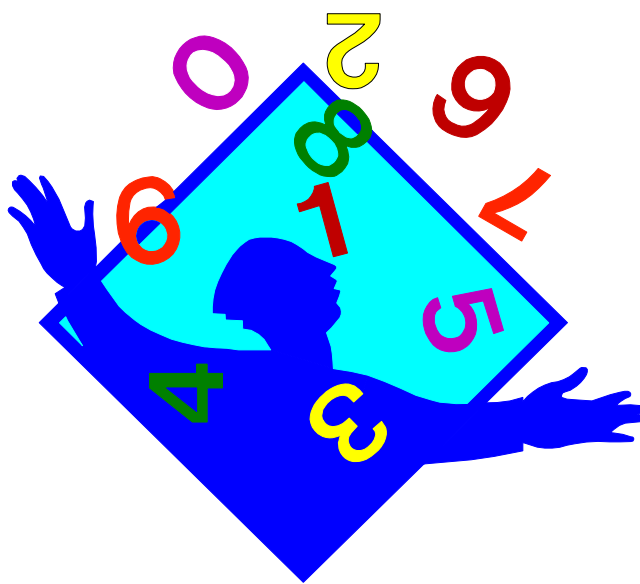


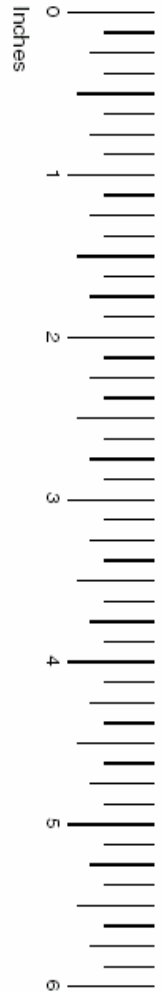
MATHEMATICS
6TH GRADE
BENCHMARK TEST



Third Testing Period
March 3-7, 2003

Grade 6

Mathematics Chart



LENGTH	
Metric	Customary
1 kilometer = 1000 meters	1 mile = 1760 yards
1 meter = 100 centimeters	1 mile = 5280 feet
1 centimeter = 10 millimeters	1 yard = 3 feet
	1 foot = 12 inches
CAPACITY AND VOLUME	
Metric	Customary
1 liter = 1000 milliliters	1 gallon = 4 quarts
	1 gallon = 128 ounces
	1 quart = 2 pints
	1 pint = 2 cups
	1 cup = 8 ounces
MASS AND WEIGHT	
Metric	Customary
1 kilogram = 1000 grams	1 ton = 2000 pounds
1 gram = 1000 milligrams	1 pound = 16 ounces
TIME	
1 year = 365 days	
1 year = 12 months	
1 year = 52 weeks	
1 week = 7 days	
1 day = 24 hours	
1 hour = 60 minutes	
1 minute = 60 seconds	

Grade 6 Mathematics Chart

Perimeter	square	$P = 4s$
	rectangle	$P = 2l + 2w$ or $P = 2(l + w)$
Circumference	circle	$C = 2\pi r$ or $C = \pi d$
Area	square	$A = s^2$
	rectangle	$A = lw$ or $A = bh$
	triangle	$A = \frac{1}{2}bh$ or $A = \frac{bh}{2}$
	trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$ or $A = \frac{(b_1 + b_2)h}{2}$
	circle	$A = \pi r^2$
Volume	cube	$V = s^3$
	rectangular prism	$V = lwh$
Pi	π	$\pi = 3.14$ or $\pi = \frac{22}{7}$

Directions: Read each problem and select the best answer. Use any available space for scratch work.

1. Barry had 15 video games. Then he bought x more, for a total of 25. Which equation could be used to find how many video games Barry bought?
- (A) $25 + x = 15$
(B) $15 + x = 25$
(C) $25 \div x = 15$
(D) $15 - x = 25$
3. In a survey of 50 people at a shopping mall, 25 people were wearing sneakers. Of the next 200 people who enter the mall, how many will likely be wearing sneakers?
- (A) 100
(B) 75
(C) 50
(D) 25

2. The length of one side and the perimeter of a regular triangle are listed in the table below.

Perimeter of Regular Triangles

Length of Side	Perimeter
3 in.	9 in.
4 in.	12 in.
5 in.	15 in.
6 in.	18 in.

Which expression can be used to find the perimeter of a similar triangle with a side length of n inches?

- (A) n^2
(B) $n + 6$
(C) $n \times 3$
(D) $n + n$

4. Mrs. Marconi had 60 brownies. She gave b brownies to each of 12 children. Which equation could be used to find the number of brownies she gave to each child?
- (A) $12 \times 60 = b$
(B) $60 - b = 12$
(C) $b + 12 = 60$
(D) $12b = 60$

5. The table below shows the ages of Tori and her sister Adele at different times.

Tori's Age (t)	Adele's Age (a)
3	6
5	8
7	10
9	12

Which formula shows the relationship between Tori's age (t) and Adele's age (a)?

- (A) $a = t - 3$
 (B) $t = a + 3$
 (C) $a = t + 3$
 (D) $t = 3 - a$

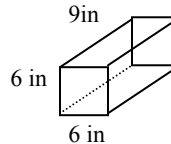
6. Of the 15 houses on Pine Street, 9 are painted white. What is the ratio of white houses to all the houses on Pine Street?

- (A) $\frac{3}{2}$
 (B) $\frac{5}{3}$
 (C) $\frac{9}{6}$
 (D) $\frac{3}{5}$

7. Mrs. Levy baked a fruitcake that weighed 32 ounces. That weight is the same as –

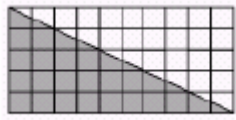
- (A) 2 pounds
 (B) 20 pounds
 (C) 2 tons
 (D) 20 tons

8. Which statement about this rectangular prism is NOT true?



- (A) It has six faces.
 (B) It has a volume of 324 in^3 .
 (C) It has a circumference of 24 inches.
 (D) Two of its faces are squares, but it is not a cube.

9. What is the area of the shaded part in the figure below?



- (A) 50 square units
 (B) 30 square units
 (C) 25 square units
 (D) 15 square units

11. Oakley wants to put a fence around his rectangular garden. What should he measure to figure out how much fence he needs for the garden?

- (A) Perimeter
 (B) Diameter
 (C) Area
 (D) Circumference

10. Look at the pattern below.

42, 48, 54, 60, 66, ...

What should you do to find the next number in the pattern?

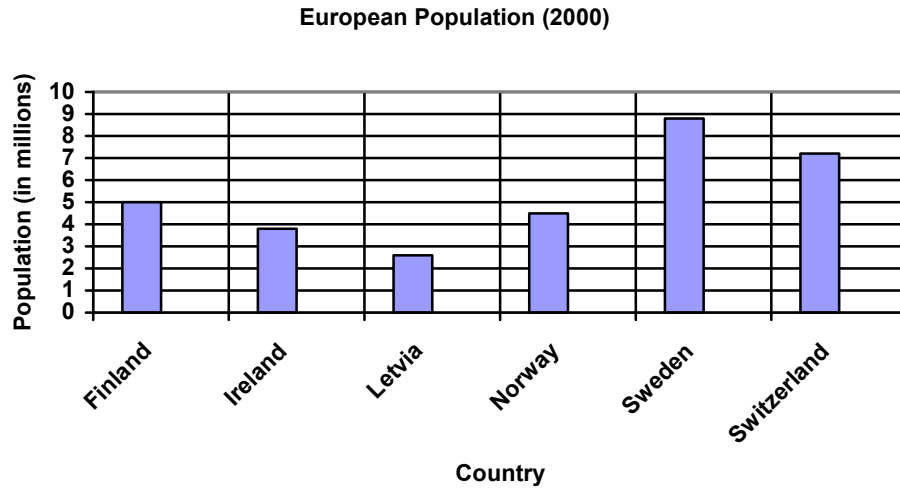
- (A) Add 4.
 (B) Subtract 4.
 (C) Add 6.
 (D) Subtract 6.

12. Micah's rectangular apartment is 9 meters long and 4.5 meters wide. What is the area of his apartment?

Record you answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

				.			
0	0	0	0		0	0	0
1	1	1	1		1	1	1
2	2	2	2		2	2	2
3	3	3	3		3	3	3
4	4	4	4		4	4	4
5	5	5	5		5	5	5
6	6	6	6		6	6	6
7	7	7	7		7	7	7
8	8	8	8		8	8	8
9	9	9	9		9	9	9

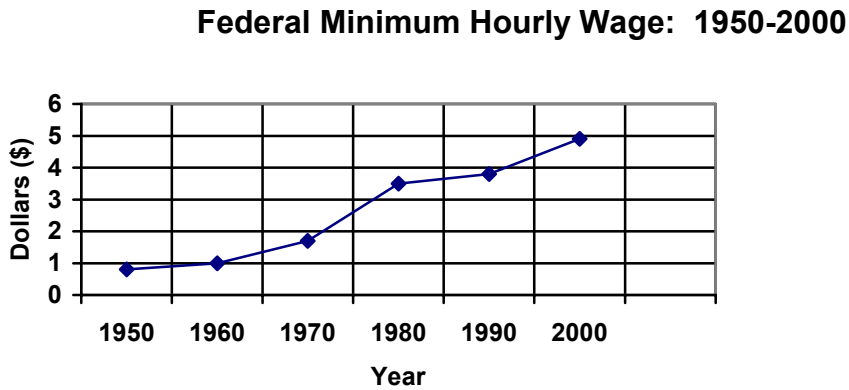
13. Use the graph below to answer the question.



In 2000, what was the population of Ireland?

- (A) 2.6 million
- (B) 3.0 million
- (C) 3.4 million
- (D) 3.8 million

14. Use the graph below to answer the question.



The greatest increase in the minimum wage took place in which 10-year period?

- (A) 1950-1960
- (B) 1960-1970
- (C) 1970-1980
- (D) 1980-1990

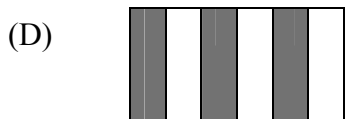
15. Which is true?

- (A) $6,605,110 > 6,650,110$
- (B) $7,720,440 < 5,702,440$
- (C) $4,607,125 > 4,670,125$
- (D) $3,045,790 < 3,405,790$

17. $\frac{1}{3}$ is closest to

- (A) 0.13
- (B) 0.20
- (C) 0.33
- (D) 0.40

16. Which figure has the largest shaded portion?



18. Which is a common multiple of 2, 5, and 12?

- (A) 10
- (B) 30
- (C) 48
- (D) 60

19. Melanie made a fruit punch by mixing $1\frac{1}{2}$ quarts of orange juice, $\frac{3}{4}$ quart of cranberry juice, and $1\frac{3}{4}$ quarts of grapefruit juice. How much punch did she make all together?

- (A) $4\frac{1}{4}$ quarts
 (B) 4 quarts
 (C) $3\frac{1}{4}$ quarts
 (D) $1\frac{3}{10}$ quarts

21. At the Pizza Factory, a slice of cheese pizza costs \$1.10, and a slice of pepperoni pizza costs \$1.45. On Friday the Factory sold 82 slices of cheese pizza and 48 slices of pepperoni pizza. How much money did they collect in all for those slices?

Round your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

				.			
Ⓐ	Ⓐ	Ⓐ	Ⓐ		Ⓐ	Ⓐ	Ⓐ
Ⓑ	Ⓑ	Ⓑ	Ⓑ		Ⓑ	Ⓑ	Ⓑ
Ⓒ	Ⓒ	Ⓒ	Ⓒ		Ⓒ	Ⓒ	Ⓒ
Ⓓ	Ⓓ	Ⓓ	Ⓓ		Ⓓ	Ⓓ	Ⓓ
⓪	⓪	⓪	⓪		⓪	⓪	⓪
①	①	①	①		①	①	①
②	②	②	②		②	②	②
③	③	③	③		③	③	③
④	④	④	④		④	④	④
⑤	⑤	⑤	⑤		⑤	⑤	⑤
⑥	⑥	⑥	⑥		⑥	⑥	⑥
⑦	⑦	⑦	⑦		⑦	⑦	⑦
⑧	⑧	⑧	⑧		⑧	⑧	⑧
⑨	⑨	⑨	⑨		⑨	⑨	⑨

20. Hans had $\frac{2}{3}$ pound of butter. He used $\frac{1}{4}$ pound of butter to make a cake. How much butter was left?

- (A) $\frac{1}{3}$
 (B) $\frac{3}{7}$
 (C) $\frac{1}{4}$
 (D) $\frac{5}{12}$

22. Circle Z has a radius of 10 centimeters and a circumference of 62.8 centimeters.

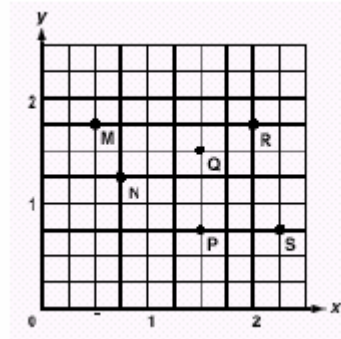
Based on these measurements, what is the value of π ?

- (A) 72.8
 (B) 52.8
 (C) 6.28
 (D) 3.14

23. The distance around the outside of a circle is its—

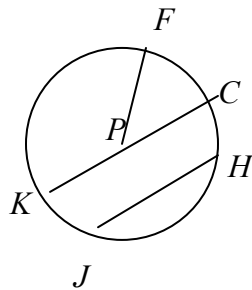
- (A) diameter
- (B) radius
- (C) chord
- (D) circumference

25. What is the location of point *S* on the coordinate grid?



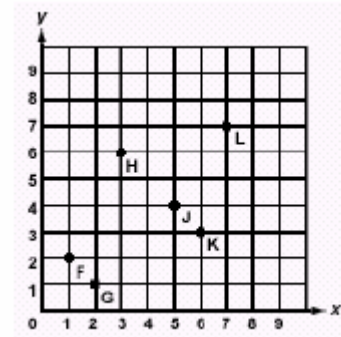
- (A) (3, 2)
- (B) (2.1, 1.3)
- (C) (2.5, 0.3)
- (D) (2.25, 0.75)

24. In this circle with center point *P*, what part of the circle is *PF*?



- (A) radius
- (B) area
- (C) diameter
- (D) circumference

26. What is the location of point *K* on the coordinate grid?



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

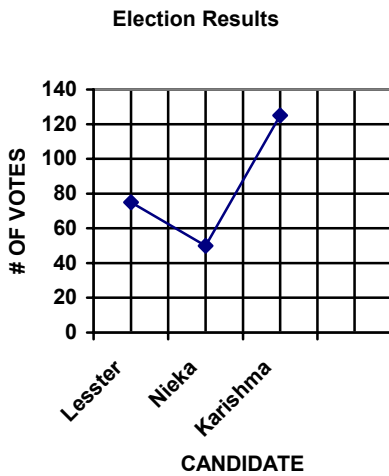
27. Lester, Nieka, and Karishma all ran for class president. Below is a table showing how many votes each candidate received.

Candidate	Votes
Lester	75
Nieka	50
Karishma	125

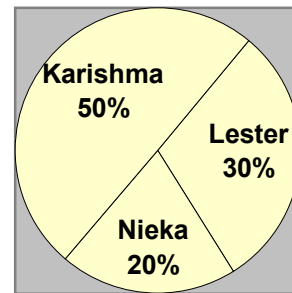
Which graph shows the best way to display the data so that it shows the percentage of votes each candidate received?

(A)

(C)

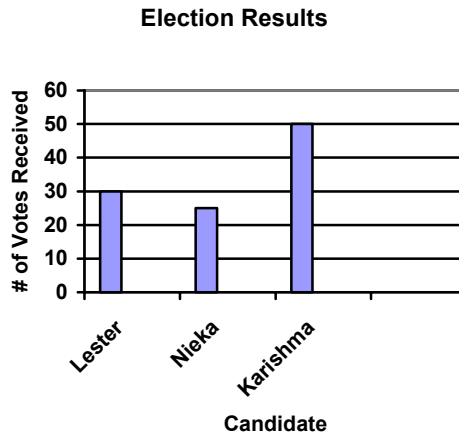
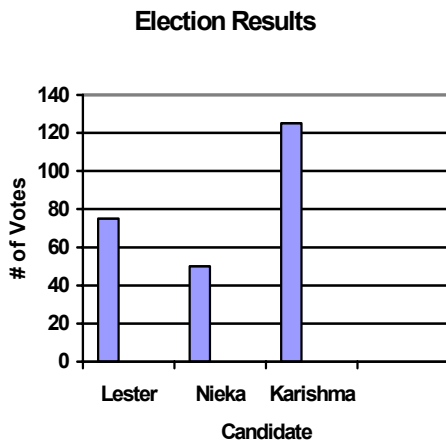


Election Results



(B)

(D)



END OF EXAMINATION