STUDENT NAME _____
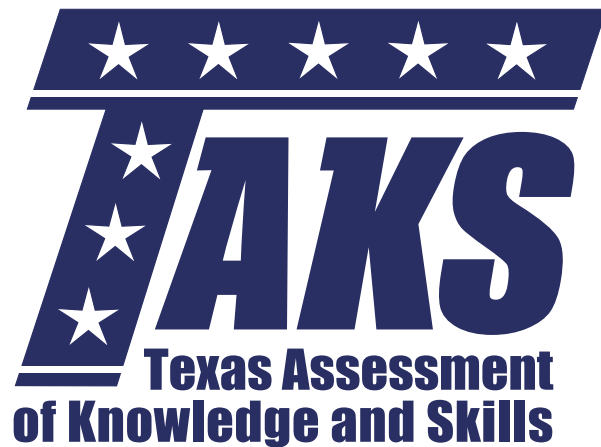
TAKS
Texas Assessment of Knowledge and Skills

GRADE 7
WRITING
MATHEMATICS
READING

Administered Spring 2003

1 The table shows the distance Pedro jogged each day last week.

Distance Jogged

Day	Distance (miles)
Monday	2.3
Tuesday	$1\frac{3}{4}$
Wednesday	$2\frac{1}{2}$
Thursday	2
Friday	1.8
Saturday	2.6
Sunday	$1\frac{3}{4}$

What was the total distance Pedro jogged last week?

A 8.7 mi

B 11 mi

C 14.7 mi

D 16 mi

2 Which expression can be used to solve the problem below?

To cater a luncheon, a hotel charges $50 per hour for use of a dining room plus $24.50 per person. What is the total cost for a 2-hour luncheon for 45 people?

F $2 \times 50 + 24.50 + 45$

G $2 \times 50 + 24.50 \times 45$

H $2 \times 24.50 + 50 \times 45$

J $2 \times 45 + 50 \times 24.50$

3 Conner's parents asked him to save $\frac{2}{5}$ of his allowance each week to help pay for summer camp. What percent of his allowance did Conner's parents ask him to save?

A 25%

B 35%

C 40%

D 60%

4 Susan has 3 siblings: Ted, Kathy, and Jake. Susan is older than Jake. Ted is younger than both his sisters but older than his brother. What information is needed to determine the order of the siblings from oldest to youngest?

F Is Kathy older or younger than Ted?

G Is Jake older or younger than Susan?

H Is Susan older or younger than Kathy?
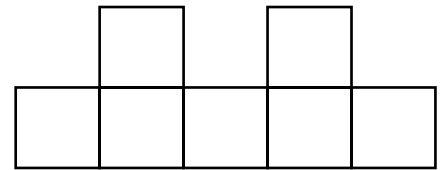
J Is Ted older or younger than Jake?

5 The top, side, and front views of a solid figure made of cubes are shown below.
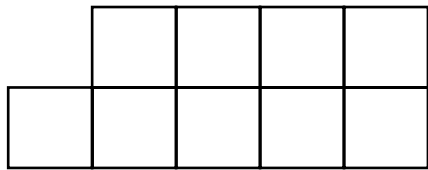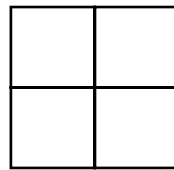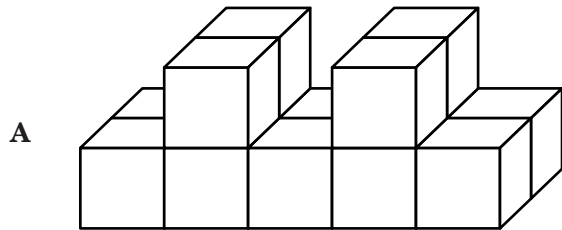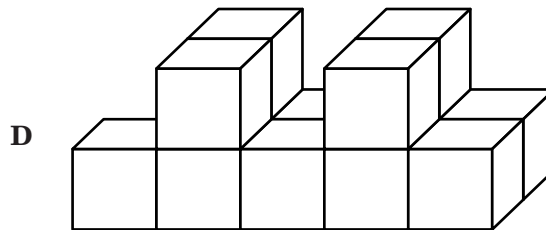

| Top | Side | Front |

Which solid figure matches the views above?
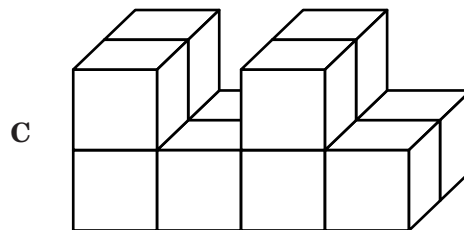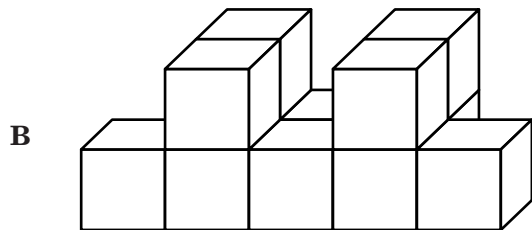
A Front

C Front

B Front

D Front

6 Which of the following CANNOT be used to find the perimeter of a square with side length s?

F $s + s + s + s$

G $2s + 2s$

H $4s$

J $s \times s$

Page 37

7 The enrollment at Clifford Junior High from 1997 through 2001 is shown below.

Enrollment at Clifford Junior High
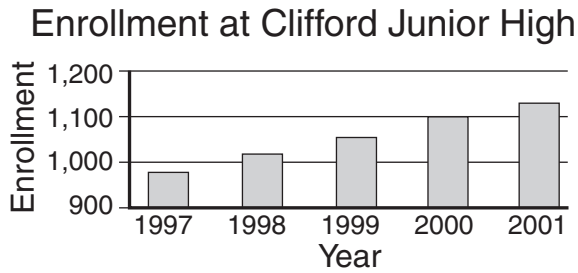
If the enrollment trend shown in the table continues, which is the best prediction of the enrollment at Clifford Junior High in 2004?

A Fewer than 1,100

B Between 1,200 and 1,300

C Between 1,400 and 1,500

D More than 1,500

8 The net profit of a company for each of 5 consecutive years is shown in the table.

Company Profit

Year	Net Profit (millions of dollars)
1984	12.5
1985	14.6
1986	13.1
1987	14.5
1988	12.2

Which statement is supported by the information in the table?

F The net profit in 1987 was 20% greater than the net profit in 1986.

G The greatest increase in net profit for 2 consecutive years occurred from 1984 to 1985.

H The greatest decrease in net profit for 2 consecutive years occurred from 1985 to 1986.

J The sum of the net profits for 1984 and 1985 was greater than the sum of the net profits for 1986 and 1987.

GO ON

9 A jewelry box is shown below. Use the ruler on the Mathematics Chart to measure the dimensions of the jewelry box in centimeters.
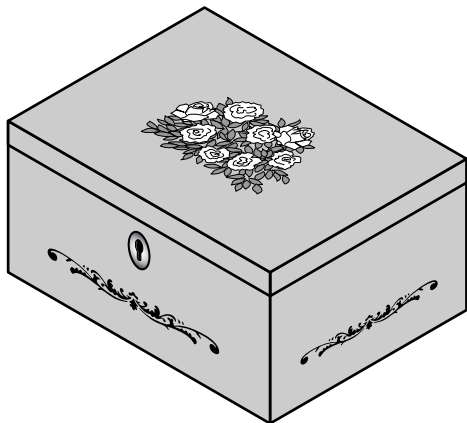
Which best represents the volume of the jewelry box?

A 6 cm^3

B 9 cm^3

C 14 cm^3

D 24 cm^3

10 Which expression can be used to find the maximum number of 0.2-meter lengths of rope that can be cut from a 6.5-meter length of rope?

F $0.2 \div 6.5$

G $0.2 + 6.5$

H $6.5 \div 0.2$

J 6.5×0.2

11 Mrs. Cotera wants to estimate the monthly operating expenses for the car she just bought, not including maintenance and repairs. Insurance will cost about $200 per month, and Mrs. Cotera expects to drive an average of 225 miles per week. What additional information does she need to estimate her monthly operating expenses?

A The cost of fuel and the one-way distance to work

B The cost of fuel and the number of miles per gallon her car gets

C The cost of fuel and her weekly take-home pay

D The number of gallons of fuel needed per week

12 Mr. Gordon asked 39 students how many times they used the dictionary last week in his class. The responses are shown in the table.

Dictionary Use

Number of Times Used	Number of Students
5	3
6	5
7	7
8	12
9	8
10	4

Which measure of the data represents the most common number of times the students used the dictionary?

F Mean

G Median

H Mode

J Range

GO ON

13 If $\angle T$ and $\angle U$ are supplementary and the measure of $\angle T$ is 70°, what is the measure of $\angle U$?

    A 110°

    B 70°

    C 20°

    D 10°

14 Kira drew a circle with a radius of 20 inches and another circle with a radius of 10 inches. What is the approximate difference between the areas of the 2 circles?

    F 300 in.^{2}

    G 314 in.^{2}

    H 942 in.^{2}

    J 1,256 in.^{2}

15 Art's Department Store is having a sale. The table shows the regular price, r, and the sale price, s, of several items.

Sale Prices

Item	Regular Price (r)	Sale Price (s)
A	$5.00	$2.50
B	$7.00	$3.50
C	$10.00	$5.00
D	$12.00	$6.00

Which formula can be used to calculate the sale price?

    A $s = r - 2.5$

    B $s = r \times 2.0$

    C $s = r \times 0.5$

    D $s = r - 0.5$

GO ON

16 Which problem situation matches the equation below?

$$15x = 120$$

F Chang collected 120 foreign postage stamps last year. He gave 15% of them to friends. What is x, the number of stamps Chang did not give away?

G Cece exercised 120 minutes each day for 15 days last month. What is x, the total number of hours Cece exercised last month?

H Demetria drove a total of 120 miles this week. She drove 15 miles more this week than she drove last week. What is x, the number of miles Demetria drove last week?

J Adam charges $15 per hour for labor to repair lawn mowers. What is x, the number of hours Adam worked if he charged $120 for labor?

17 The cost of Matt and Natalie's dinner was $27.35. They want to leave a 20% tip. Which of the following is closest to the amount of the tip they want to leave?

A $4.00

B $4.50

C $5.00

D $5.50

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18 At Kingston Junior High School, 200 students were asked to name a career they would like to pursue. The results are shown in the table below.

Career Choice

Career	Number of Students
Actor/actress	30
Athlete	40
Business executive	70
Pilot	20
Politician	10
Musician	22
Teacher	8

Which of the following statements is supported by data in the table?

F More than 25% of the students would like to pursue a career in acting or music.

G The least number of students chose teaching because of the college preparation required.

H The mode of the data is 30.

J Exactly 10% of the students would like to pursue a career in politics.

19 During a week in December in Anchorage, Alaska, the daily high temperatures were 20°F, 18°F, −10°F, 15°F, −15°F, 25°F, and 11°F. Which expression can be used to find the average daily high temperature during that week?

A (20 + 18 + 10 + 15 + 15 + 25 + 11) ÷ 7

B 20 + 18 + 10 + 15 + 15 + 25 + 11 ÷ 7

C [20 + 18 + (−10) + 15 + (−15) + 25 + 11] ÷ 7

D 20 + 18 + (−10) + 15 + (−15) + 25 + 11 ÷ 7

20 Jeffrey spent $\frac{1}{2}$ of his Saturday earnings on a pair of shoes and $\frac{1}{2}$ of the remaining amount on a CD. After he spent $5.35 on lunch, he had $10.85 left. How much did Jeffrey earn on Saturday?

F $32.25

G $36.45

H $60.40

J $64.80

21 Mr. McCrea is building a toy box like the one shown below.

2 ft

4 ft

5 ft
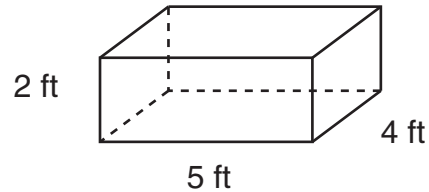
What is the volume of the toy box in cubic feet?

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

22 If the corresponding angles of 2 polygons are congruent and the lengths of the corresponding sides of the polygons are proportional, the polygons are —

F regular

G congruent

H symmetric

J similar

23 Pilar spends a total of 60 hours per week at school and at her job. She attends school from 8:45 A.M. until 3:45 P.M., Monday through Friday. Which equation can be used to find t, the maximum number of hours Pilar works at her job each week?
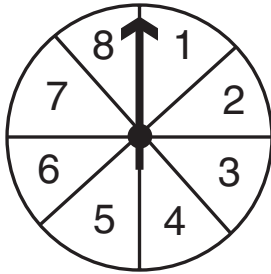
A $t = 60 - (5 \times 7)$
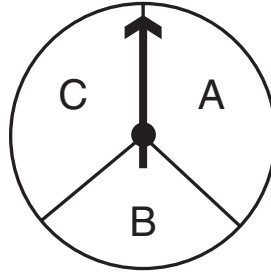
B $t = 60 - (5 \times 8)$

C $t = 60 - 7 + 7 + 7 + 7 + 7$
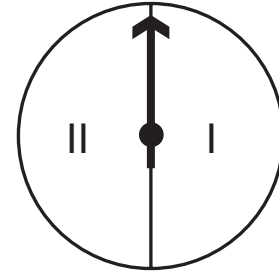
D $t = 5 \times 7 - 60$

24 Lily played a game where she spun each of the spinners shown below once.

| Spinner 1 | Spinner 2 | Spinner 3 |

Which choice shows all the possible unique combinations of an odd number on Spinner 1, an A or a B on Spinner 2, and a II on Spinner 3?

F

Possible Outcomes

Spinner 1	Spinner 2	Spinner 3
1	A	II
2	B	II
3	A	II
4	B	II
5	A	II
6	B	II
7	A	II
8	B	II

H

Possible Outcomes

Spinner 1	Spinner 2	Spinner 3
1	A	II
3	B	II
5	A	II
7	B	II
1	A	II
3	B	II
5	A	II
7	B	II

G

Possible Outcomes

Spinner 1	Spinner 2	Spinner 3
1	A	II
3	A	II
5	A	II
7	A	II
1	B	II
3	B	II
5	B	II
7	B	II

J

Possible Outcomes

Spinner 1	Spinner 2	Spinner 3
1	A	I
3	A	II
5	A	I
7	A	II
1	B	I
3	B	II
5	B	I
7	B	II

25 Margarita traces a circle with a radius of 20 centimeters like the one shown below. She will color in the shaded region.

20 cm
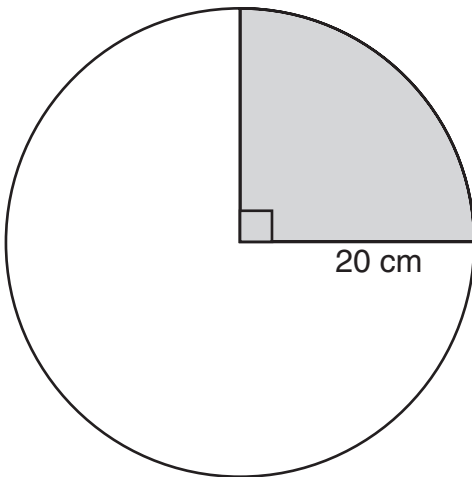
What is the approximate area of the shaded region?

A   90 cm ^{2}

B   270 cm ^{2}

C   314 cm ^{2}

D   1,256 cm ^{2}

26 The fraction $\frac{5}{8}$ is found between which pair of fractions on a number line?

F $\frac{8}{16}$ and $\frac{21}{32}$

G $\frac{9}{16}$ and $\frac{19}{32}$

H $\frac{10}{16}$ and $\frac{24}{32}$

J $\frac{11}{16}$ and $\frac{24}{32}$

27 In which data set are the mean, median, mode, and range all the same number?

A   {1, 2, 3, 3, 2, 1, 2}

B   {1, 2, 3, 1, 2, 3, 1}

C   {1, 3, 3, 3, 2, 3, 1}

D   {2, 2, 1, 2, 3, 2, 3}

28 The prices of 3 different bottles of shampoo are given in the table.

Shampoo Prices

Bottle Size (ounces)	Price
20	$7.18
15	$4.73
10	$3.58

Which size bottle of shampoo has the lowest price per ounce?

F The 20-oz bottle only

G The 15-oz bottle and the 20-oz bottle

H The 15-oz bottle only

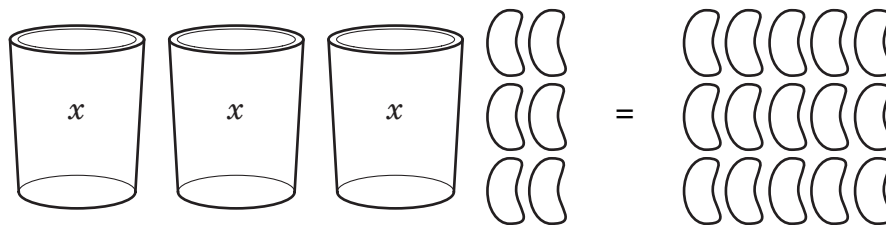**J** The 10-oz bottle and the 15-oz bottle

29 Which of the following has 2 parallel bases that are not polygons?

A Cone

B Prism

C Pyramid

D Cylinder

30 What is the value of the expression $(3 + 3)^2 \div 6 - 2 \times 4$?

F -18
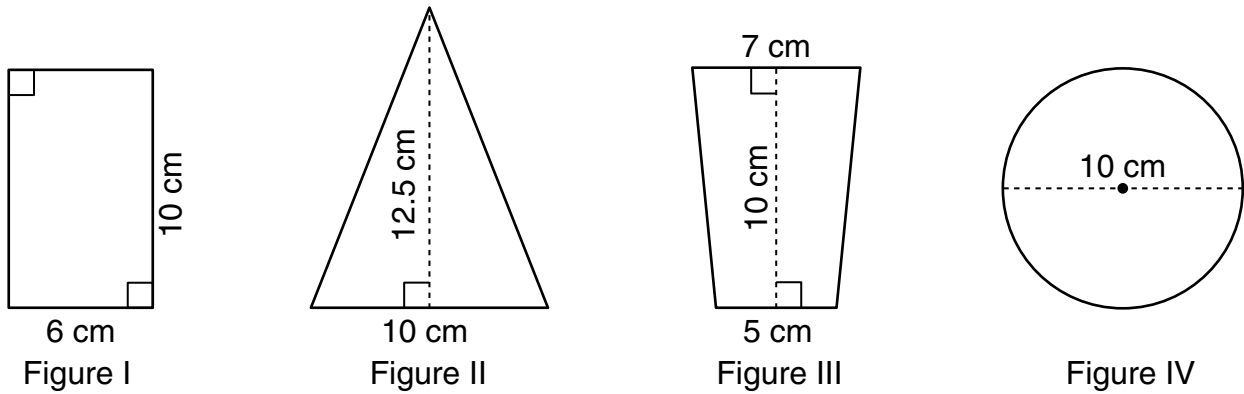
G -2

H 0

J 16

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31 The model below represents the equation $3x + 6 = 15$.

What is the first step in finding the value of x?

A Divide the beans equally among the 3 cups

B Add 15 beans to each side of the model

C Add 6 beans to each side of the model

D Subtract 6 beans from each side of the model

32 A company published 110 books last year, and 8 of them became best-sellers. Which best represents the percent of books the company published last year that did NOT become best-sellers?

F 7%

G 8%

H 93%

J 102%

33 Cassie draws the following 4 figures.

10 cm | 6 cm — Figure I
12.5 cm | 10 cm — Figure II
7 cm | 10 cm | 5 cm — Figure III
10 cm — Figure IV

Which 2 figures have the same area?

A Figure I and Figure II

B Figure I and Figure III

C Figure II and Figure III

D Figure II and Figure IV

---

34 A recipe that makes 18 cookies calls for $\frac{3}{4}$ cup of sugar. How much sugar is needed to make 2 dozen cookies using this recipe?

F $\frac{3}{8}$ c

G 1 c

H $1\frac{1}{3}$ c

J $1\frac{1}{2}$ c

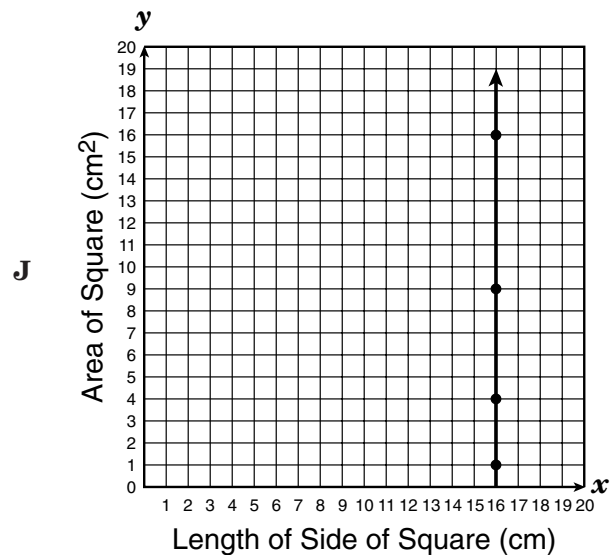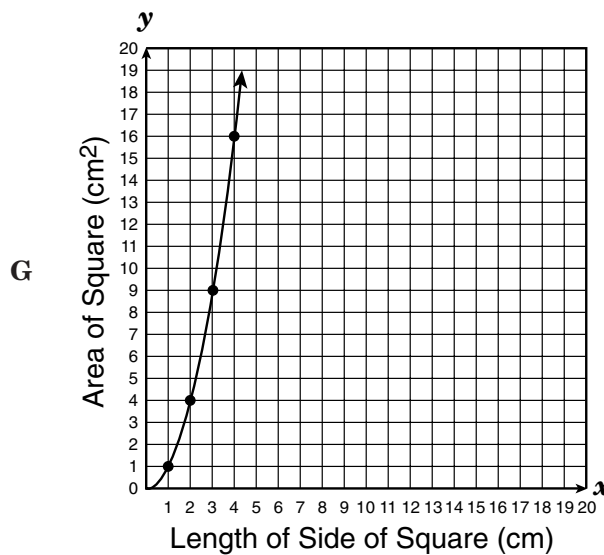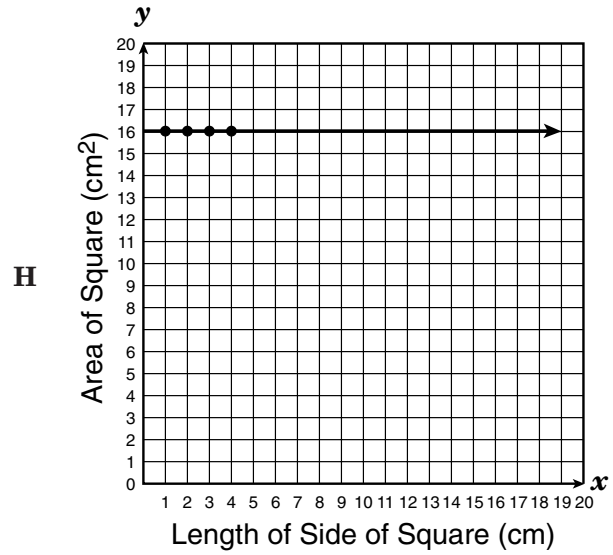**35** Which description shows the relationship between a term and n, its position in the sequence?
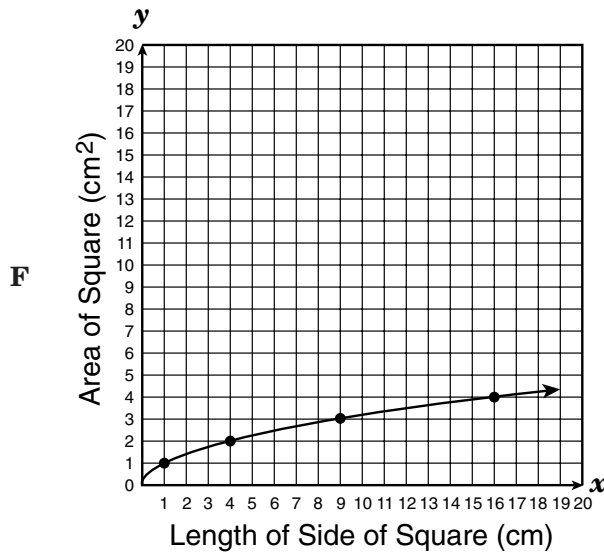
Position	1	2	3	4	5	n
Value of Term	1	4	7	10	13	

A Add 3 to n

B Multiply n by 2 and then subtract 3

C Multiply n by 2 and then add 3

D Multiply n by 3 and then subtract 2

GO ON

36 The data in the table below represent the relationship between the length of a side of a square in centimeters, x, and the area of a square in centimeters squared, y.

Length of side, x (cm)	Area, y (cm^2)
1	1
2	4
3	9
4	16

Which graph best represents the data in the table above?

F

Length of Side of Square (cm)

H

Length of Side of Square (cm)

G

Length of Side of Square (cm)

J

Length of Side of Square (cm)

Page 50

37 Mrs. Gutiérrez bought 2 dozen cans of soda priced at 6 cans for $1.98 and 18 bottles of water priced at 6 bottles for $2.16. What is the total amount she spent, not including tax, on soda and bottled water?

    A $6.48

    B $7.92
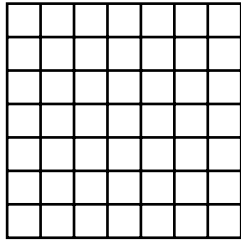
    C $14.40

    D $16.56

38 $\triangle RST$ and $\triangle JKL$ are similar.
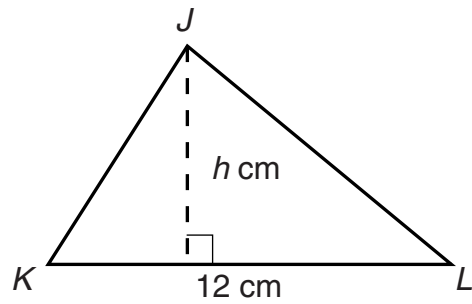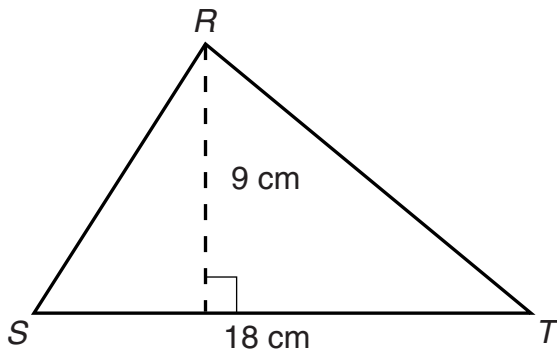
Which choice shows the equations that can be used to find the area of $\triangle JKL$?

F First use $\dfrac{9}{18} = \dfrac{h}{12}$ and then use area $= \dfrac{1}{2}(12h)$

G First use $\dfrac{9}{18} = \dfrac{h}{12}$ and then use area $= 12h$

H First use $\dfrac{9}{18} = \dfrac{12}{h}$ and then use area $= \dfrac{1}{2}(12h)$

J First use $\dfrac{9}{18} = \dfrac{12}{h}$ and then use area $= 12h$

39 The model below represents $\sqrt{49} = 7$.

Which arrangement of small squares can be used to model a large square that represents $\sqrt{196}$?
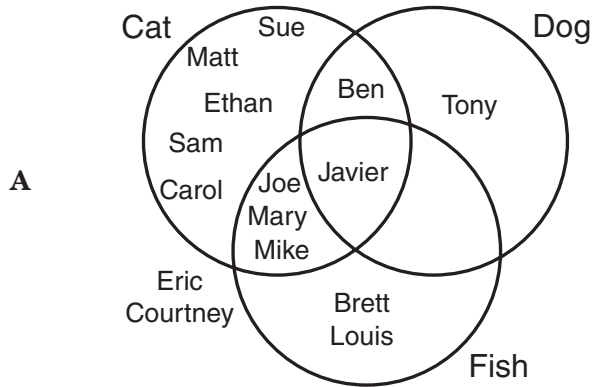
A 4 rows of 49 squares

B 6 rows of 36 squares

C 12 rows of 12 squares

D 14 rows of 14 squares

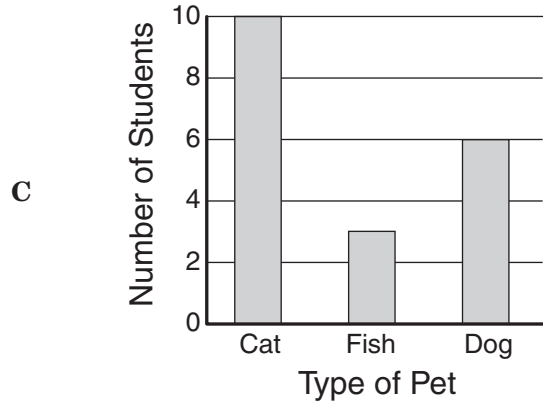**40** Which statement is always true about an equilateral triangle?

F It has 3 congruent angles.

G It has 1 right angle.

H It has exactly 2 congruent sides.

J The sum of any 2 angles is 180°.

41 Aaron polled 15 classmates to find out what kinds of pets they have. Which of the following gives the most detailed information about individual students and their pets?

A

Types of Pets Owned by Students

Cat — Sue, Matt, Ethan, Sam, Carol, Eric, Courtney
Dog — Tony
Fish — Brett, Louis
Ben (Cat ∩ Dog)
Joe, Mary, Mike (Cat ∩ Fish)
Javier (Cat ∩ Dog ∩ Fish)

C

Types of Pets Owned by Students

Number of Students (y-axis: 0, 2, 4, 6, 8, 10)		
Cat: 10	Fish: 3	Dog: 6

Type of Pet

B

Types of Pets Owned by Students

Type of Pet	Number of Students
Cat	10
Fish	6
Dog	3

D

Types of Pets Owned by Students

Fish 40%
Dog 20%
Cat 40%
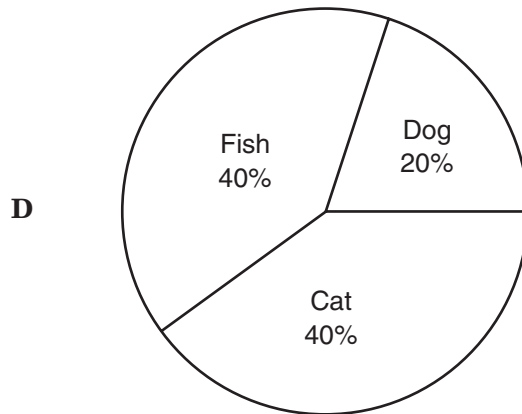
42 The table below shows what 7 students charge per hour for tutoring.

Tutoring Fees

| Tutor	Fee per Hour
Lee	$3.25
Mick	$4.50
Andreas	$4.00
Cyndi	$4.50
Dirk	$3.75
Glenda	$4.75
Kristen	$4.25

What is the median fee per hour for tutoring by these students?

F $1.50

G $4.15

H $4.25

J $4.50

43 Luis is in charge of making props for a school play. He needs to make a large circular wooden clock that measures about 6 feet in circumference. Which equation can he use to find r, the radius of the clock?

A $r = \dfrac{6}{\pi}$

B $r = \dfrac{12}{\pi}$

C $r = \dfrac{6}{2\pi}$

D $r = \dfrac{12}{2\pi}$

44 If point K is translated 4 units to the left and 3 units down, what will point K's new coordinates be?
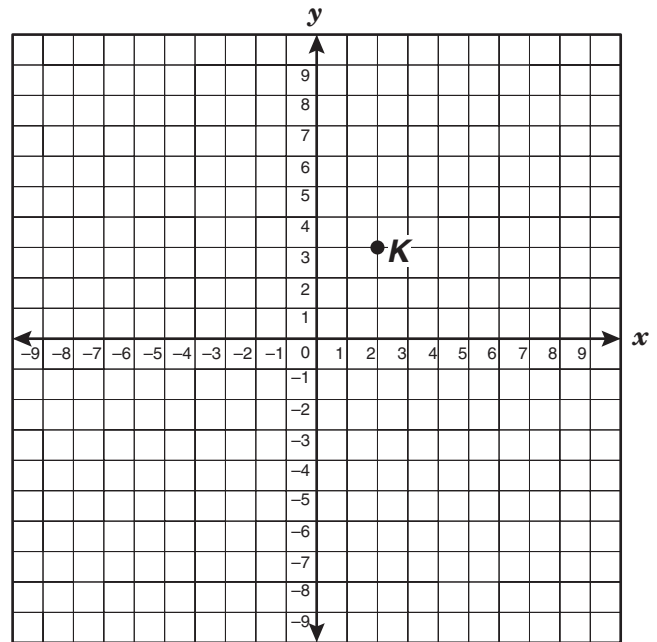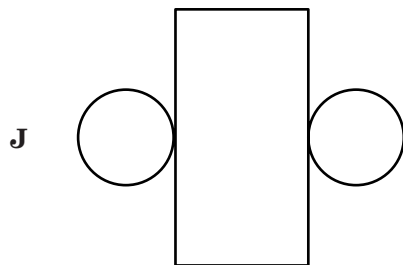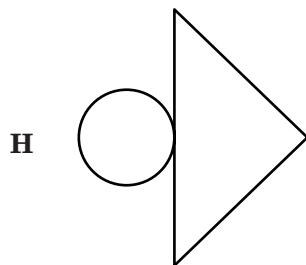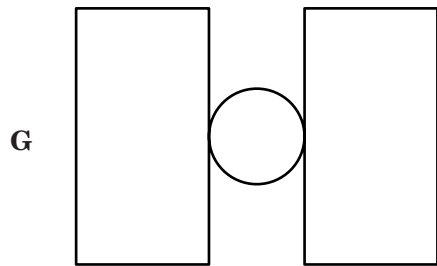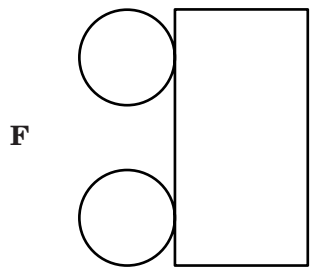

F $(-2, 0)$

G $(-1, -1)$

H $(6, 0)$

J $(5, -1)$

45 Patrick drew a map of his neighborhood. He used a scale in which 1 inch equals 2 miles. What distance on Patrick's map should represent the 1.5 miles between his house and the nearest gas station?

A 0.3 in.

B 0.75 in.

C 1.3 in.

D 3 in.

GO ON

46 Which net can be used to make a cylinder?

F

G

H

J

47 Mr. Zimmerman started a 6-week exercise program. The first week he jogged 1 mile each day, the second week he jogged $1\frac{1}{4}$ miles each day, and the third week he jogged $1\frac{1}{2}$ miles each day. If the pattern continues, how far will he jog each day of the sixth week?

A $1\frac{1}{4}$ mi

B $2\frac{1}{4}$ mi

C 6 mi

D $9\frac{3}{4}$ mi

48 A bowler scored between 195 points and 215 points per game. Which is the best estimate of the total points she scored in 8 games?

F From 1,350 to 1,550

G From 1,550 to 1,750

H From 1,750 to 1,950

J From 1,950 to 2,150

Texas Assessment of Knowledge and Skills - Answer Key

Grade: 07
Subject: Mathematics
Administration: Spring 2003

Item Number	Correct Answer	Objective Measured	Student Expectations
01	C	01	7.2 (B)
02	G	06	7.14 (A)
03	C	01	7.1 (B)
04	H	06	7.13 (A)
05	D	03	7.8 (A)
06	J	02	7.4 (A)
07	B	05	7.11 (B)
08	G	06	7.13 (A)
09	D	04	7.9 (A)
10	H	01	7.2 (A)
11	B	06	7.15 (A)
12	H	05	7.12 (B)
13	A	03	7.6 (A)
14	H	04	7.9 (A)
15	C	02	7.4 (A)
16	J	02	7.5 (B)
17	D	02	7.3 (A)
18	F	05	7.11 (B)
19	C	01	7.2 (C)
20	J	06	7.13 (C)
21	40	04	7.9 (A)
22	J	03	7.6 (D)
23	A	06	7.14 (A)
24	G	05	7.10 (A)
25	C	04	7.9 (A)
26	F	01	7.1 (A)
27	A	05	7.12 (A)
28	H	02	7.3 (B)
29	D	03	7.6 (C)
30	G	01	7.2 (E)
31	D	02	7.5 (A)
32	H	02	7.3 (A)
33	B	04	7.9 (A)
34	G	01	7.2 (D)
35	D	02	7.4 (C)
36	G	02	7.4 (B)
37	C	01	7.2 (F)
38	F	06	7.13 (C)
39	D	01	7.1 (C)
40	F	03	7.6 (B)
41	A	05	7.11 (A)
42	H	05	7.12 (A)
43	C	06	7.14 (A)
44	F	03	7.7 (A)
45	B	02	7.3 (B)
46	J	03	7.8 (B)
47	B	06	7.15 (A)
48	G	01	7.2 (G)