Texas Assessment of Knowledge and Skills
Grade: 10
Subject: Mathematics
Administration: Spring 2003

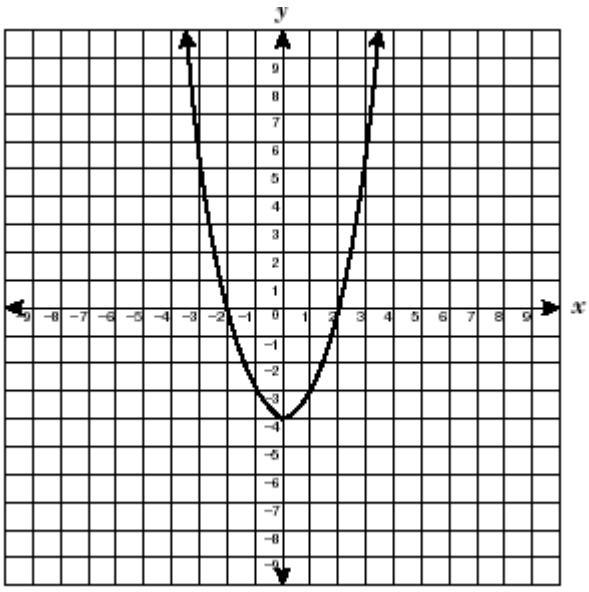
NOTE: Measurement questions may have had scale altered in duplication.

10-Objective 1: The student will describe functional relationships in a variety of ways.

A(b)(1) Foundations for functions. The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways.

(E) The student interprets and makes inferences from functional relationships.

5 Jake studied the parabola shown below.



Which is an accurate conclusion that Jake could make about this parabola?

A The vertex is at (–2, 0).
B The minimum value is at (0, –4).
C The maximum value is at (2, 0).
D The axis of symmetry is the *x*-axis.

10-Objective 1

AB1(C) The student describes functional relationships for given problem situations and writes equations or inequalities to answer questions arising from the situations.

7 Vicki works as a salesclerk in a clothing store. She earns $10 per hour plus a commission of 6% of her total sales. Which equation represents e, her total earnings when she works h hours and sells a total of d dollars in merchandise?

A $e = 10h + 0.06d$
B $e = 10h + 0.6d$
C $e = 6h + 10d$
D $e = 0.06h + 10d$

(A) The student describes independent and dependent quantities in functional relationships.

19 A function is described by the equation $f(x) = x^2 + 5$. The replacement set for the independent variable is $\{1, 5, 7, 12\}$. Which of the following is contained in the corresponding set for the dependent variable?

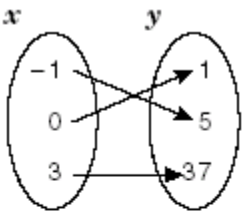
A 0
B 6
C 7
D 15

10-Objective 1

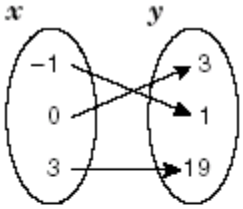
AB1(D) The student represents relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.

43 Which mapping best represents the function $y = 2x^2 + 1$ when the replacement set for x is $\{-1, 0, 3\}$?

A



C



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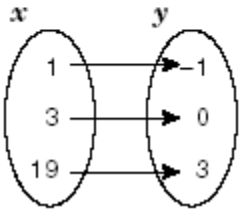

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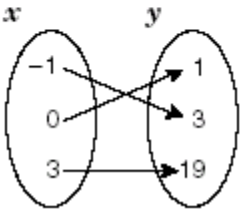


AB1(B) The student [gathers and records data, or] uses data sets, to determine functional (systematic) relationships between quantities.

45 Which equation best describes the relationship between x and y in this table?

x	y
−4	−11
−1	−2
2	7
5	16

A $y = \frac{1}{3}x + 1$

B $y = \frac{1}{3}x - 1$

C $y = 3x - 1$

D $y = 3x + 1$

10-Objective 2: The student will demonstrate an understanding of the properties and attributes of functions.

A(b)(4) Foundations for functions. The student understands the importance of the skills required to manipulate symbols in order to solve problems and uses the necessary algebraic skills required to simplify algebraic expressions and solve equations and inequalities in problem situations.

(B) The student uses the commutative, associative, and distributive properties to simplify algebraic expressions.

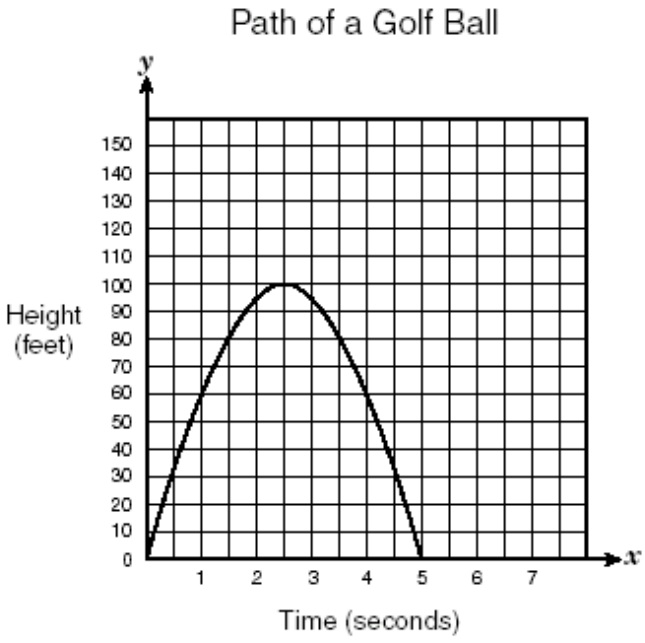
10 Simplify the expression $3(x + 1) - 2(3x + 7)$.

F $-3x - 11$
G $-3x - 10$
H $-3x - 8$
J $-3x + 17$

A(b)(2) Foundations for functions. The student uses the properties and attributes of functions.

(B) For a variety of situations, the student identifies the mathematical domains and ranges and determines reasonable domain and range values for given situations.

14 The graph shows the path of a golf ball.



What is the range of this function?
F $0 < y < 100$
G $0 \le y \le 100$
H $0 \le x \le 5$
J $0 < x < 5$

10-Objective 2

AB4(A)The student finds specific function values, simplifies polynomial expressions, transforms and solves equations, and factors as necessary in problem situations.

31 In the equation $y = 2x^2 - 5x - 18$, which is a value of x when $y = 0$?

A -18

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

C 2

D $4\frac{1}{2}$

AB4(A)The student finds specific function values, simplifies polynomial expressions, transforms and solves equations, and factors as necessary in problem situations.

37 After a ball is dropped, the rebound height of each bounce decreases. The equation $y = 5(0.8)^x$ shows the relationship between x, the number of bounces, and y, the height of the bounce, for a certain ball. What is the approximate height of the fifth bounce of this ball to the nearest tenth of a unit?

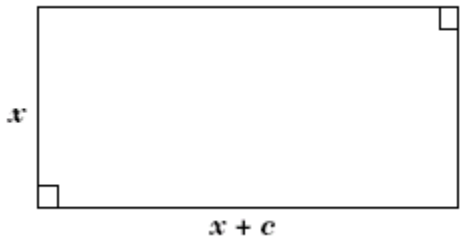
A 20.0 units
B 4.0 units
C 1.6 units
D 1.3 units

10-Objective 2

A(b)(3)Foundations for functions. The student understands how algebra can be used to express generalizations and recognizes and uses the power of symbols to represent situations.

(A) The student uses symbols to represent unknowns and variables.

53 Which equation best represents the area, A, of the rectangle below?



A $A = 2x + 2(x + c)$
B $A = x\,2 + (x + c)^2$
C $A = x(x + c)$
D $A = 2x(x + c)$

10-Objective 3: The student will demonstrate an understanding of linear functions.

A(c)(2) Linear functions. The student understands the meaning of the slope and intercepts of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations.

(D) The student graphs and writes equations of lines given characteristics such as two points, a point and a slope, or a slope and y-intercept.

9 Which of the following describes the line containing the points (0, 4) and (3, –2)?

A $y = -2x + 4$

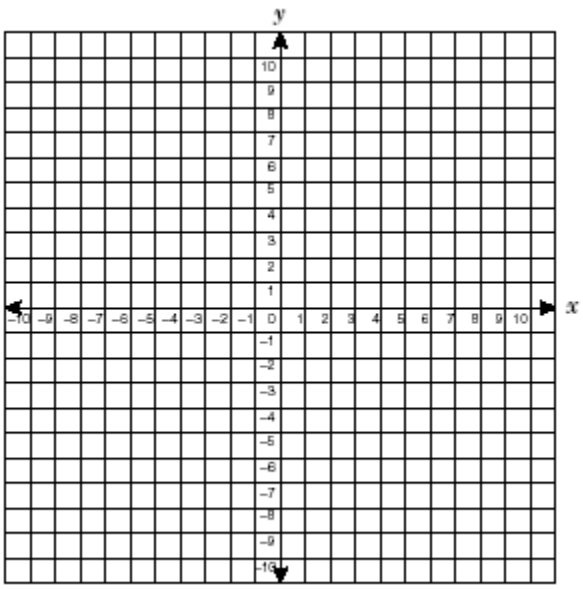
B $y = \frac{1}{2}x + 6$

C $y = 2x + 4$

D $y = -\frac{1}{2}x + 6$

C) The student investigates, describes, and predicts the effects of changes in *m* and *b* on the graph of *y = mx + b.*

24 Which best describes the effect on the graph of $f(x) = 4x + 8$ if the y-intercept is changed to –3?



F The slope decreases.
G The new line passes through the origin.
H The x-intercept increases.
J The y-intercept increases.

10-Objective 3

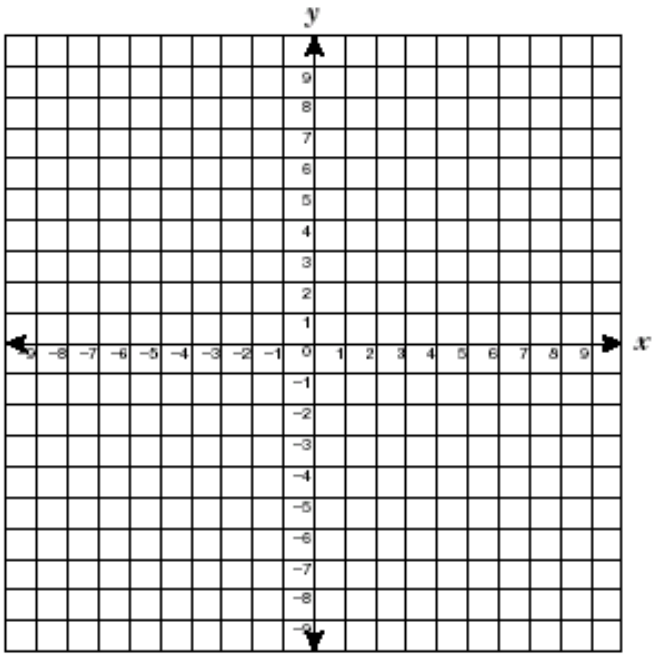
AC2(E) The student determines the intercepts of linear functions from graphs, tables, and algebraic representations.

26 What is the y-intercept of the function $f(x) = 3(x - 2)$?

F 3
G 1
H −2
J −6

AC2(A) The student develops the concept of slope as rate of change and determines slopes from graphs, tables, and algebraic representations.

46 What is m, the slope of the line that contains the points (2, 0), (0, 3), and (4, −3)?



F $m = \frac{3}{2}$

G $m = \frac{2}{3}$

H $m = -\frac{2}{3}$

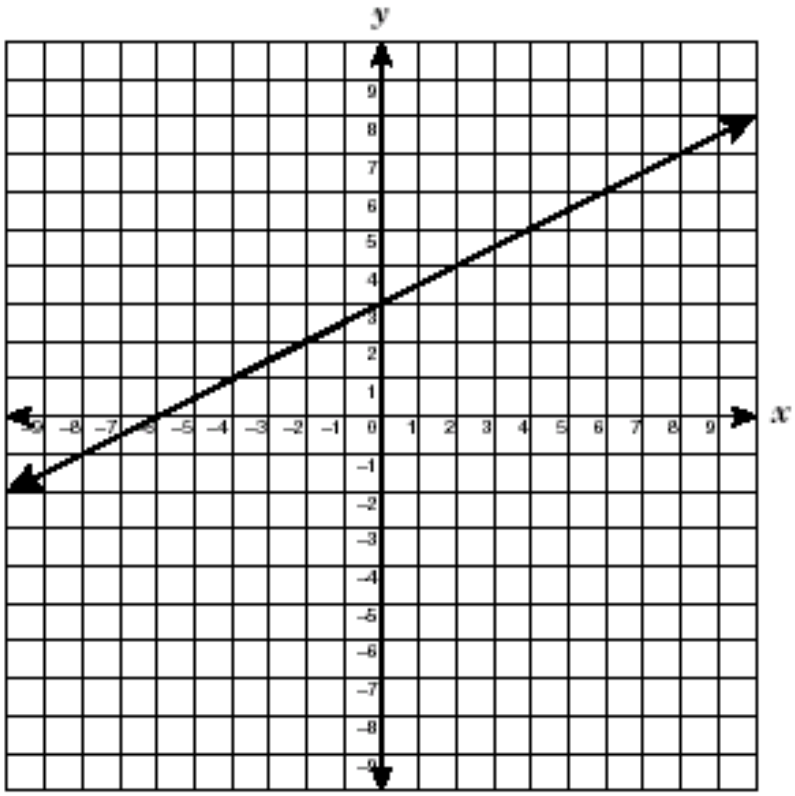
J $m = -\frac{3}{2}$

10-Objective 3

A(c)(1)Linear functions. The student understands that linear functions can be represented in different ways and translates among their various representations.

(C) The student translates among and uses algebraic, tabular, graphical, or verbal descriptions of linear functions.

49 Which linear function best describes the graph shown below?



A $y = -3x + \frac{1}{2}$

B $y = \frac{1}{2}x + 3$

C $y = -3x - \frac{1}{2}$

D $y = \frac{1}{2}x - 3$

10-Objective 4: The student will formulate and use linear equations and inequalities.

A(c)(3) Linear functions. The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation.

(A) The student analyzes situations involving linear functions and formulates linear equations or inequalities to solve problems.

4 At Northwest Electronics audiotapes cost $5.00 per package, and videotapes cost $10.00 per package. Which inequality best describes the number of packages of audiotapes, a, and the number of packages of videotapes, v, that can be purchased for $45.00 or less?

F $5a + 10v < 45$
G $10a + 5v \leq 45$
H $5a + 10v \leq 45$
J $10a + 5v < 45$

A(c)(4) Linear functions. The student formulates systems of linear equations from problem situations, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation.

A) The student analyzes situations and formulates systems of linear equations to solve problems.

20 The length of a rectangle is equal to triple the width. Which system of equations can be used to find the dimensions of the rectangle if the perimeter is 85 centimeters?

F $l = w + 3$
$2(l + w) = 85$
G $l = 3w$
$2l + 6w = 85$
H $l = 3w$
$2(l + w) = 85$
J $l = w + 3$
$2l + 6w = 85$

AC3(B) The student investigates methods for solving linear equations and inequalities using [concrete] models, graphs, and the properties of equality, selects a method, and solves the equations and inequalities.

34 What is the value of y if $(3, y)$ is a solution to the equation $5x - 3y = 18$?

F 3
G 1
H -1
J -11

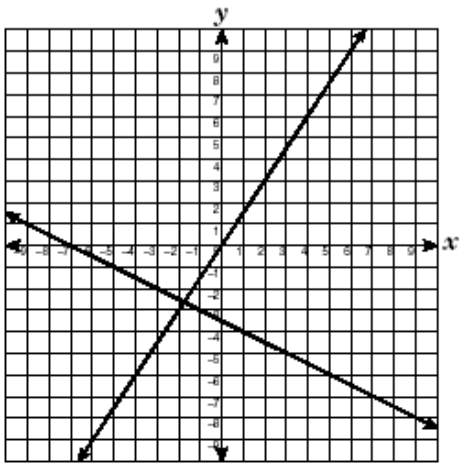
10-Objective 4

AC4(B)The student solves systems of linear equations using [concrete] models, graphs, tables, and algebraic methods.

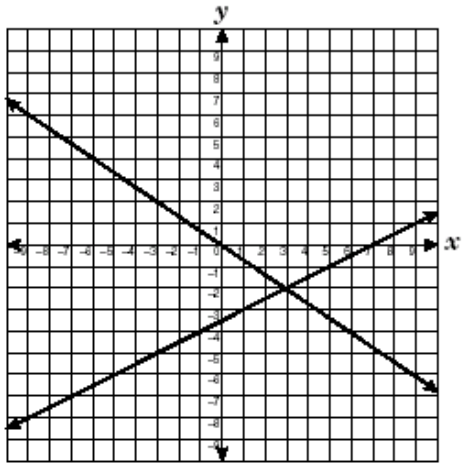
36 Which graph best represents a solution to this system of equations?

$$2x - 3y = 0$$
$$x + 2y = -7$$

F



H



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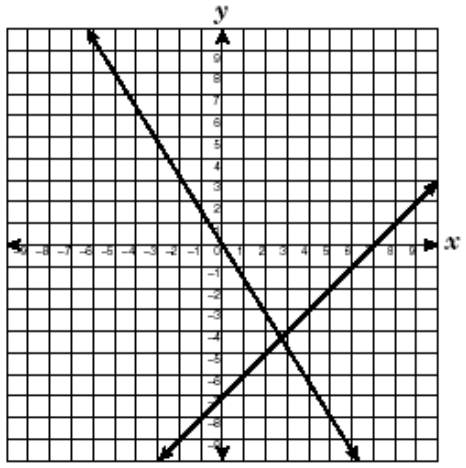

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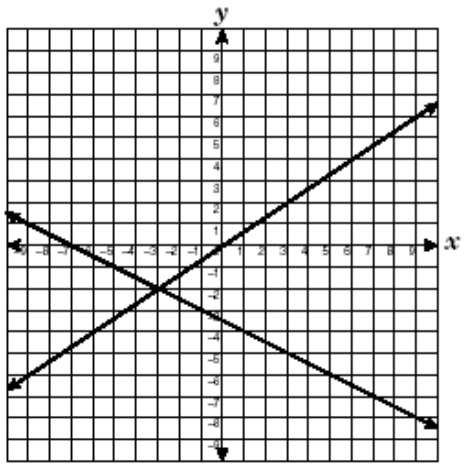


10-Objective 4

AC4(B) The student solves systems of linear equations using [concrete] models, graphs, tables, and algebraic methods.

47 Marcos had 15 coins in nickels and quarters. He had 3 more quarters than nickels. He wrote a system of equations to represent this situation, letting x represent the number of nickels and y represent the number of quarters. Then he solved the system by graphing. What is the solution?

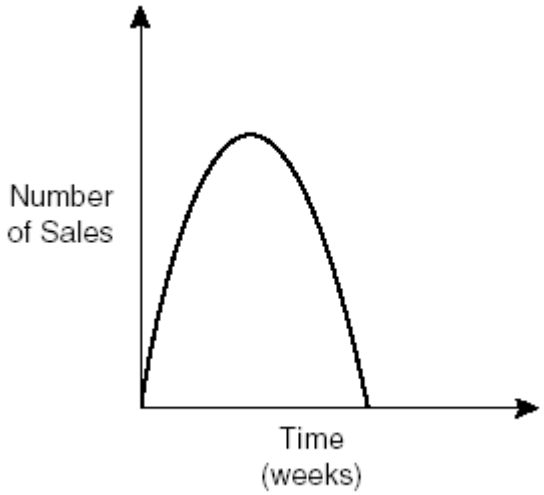
A (6, 9)
B (5, 10)
C (9, 6)
D (10, 5)

10-Objective 5: The student will demonstrate an understanding of quadratic and other nonlinear functions.

A(d)(1) Quadratic and other nonlinear functions. The student understands that the graphs of quadratic functions are affected by the parameters of the function and can interpret and describe the effects of changes in the parameters of quadratic functions.

(D) For problem situations, the student analyzes graphs of quadratic functions and draws conclusions.

1 The sales record for a recent hit CD at Tony's Music Store is shown on the graph below.



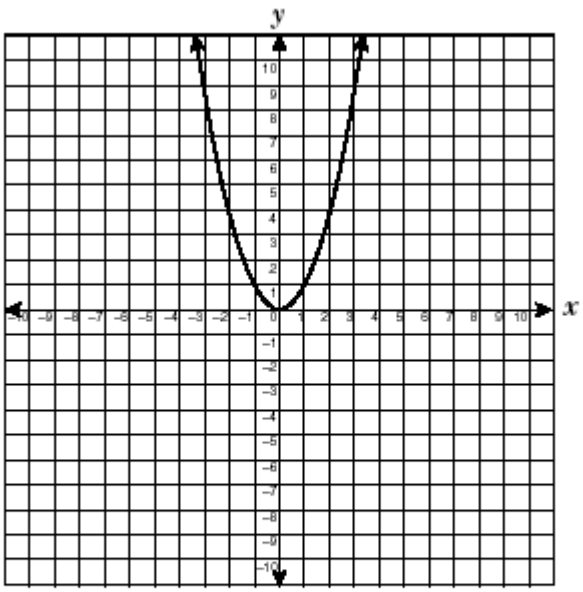
Which statement best describes the sales of this CD?

A Sales rapidly increased, reached a peak, and then gradually decreased.
B Sales gradually increased, reached a peak, and then leveled off.
C Sales rapidly increased, reached a peak, and then rapidly decreased.
D Sales remained constant throughout the time period.

10-Objective 5

AD1(B)The student investigates, describes, and predicts the effects of changes in *a* on the graph of $y = ax^2$.

22 The graph of the function $y = x^2$ is given below.



How will the graph be affected if the coefficient of x^2 is decreased to $\frac{1}{4}$?

F The parabola will be wider.
G The parabola will be narrower.
H The parabola will be translated up.
J The parabola will be translated down.

A(d)(2) Quadratic and other nonlinear functions. The student understands there is more than one way to solve a quadratic equation and solves them using appropriate methods.

B) The student relates the solutions of quadratic equations to the roots of their functions.

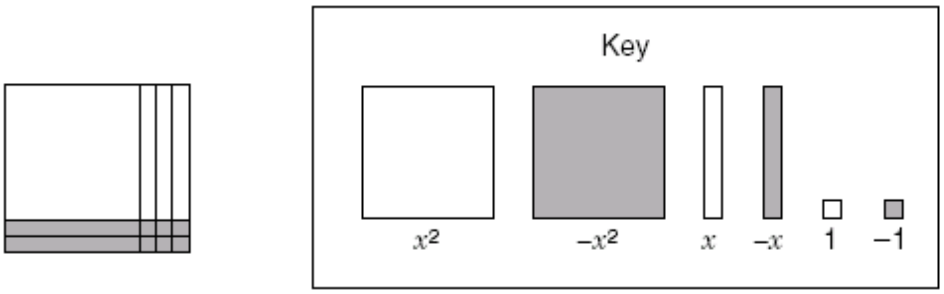
25 What are the roots of the quadratic equation $x^2 - 3x + 2 = 0$?

A –2 and –1
B –2 and 1
C 2 and –1
D 2 and 1

10-Objective 5

AD2(A) The student solves quadratic equations using [concrete] models, tables, graphs, and algebraic methods.

27 The polynomial $x^2 + x - 6$ is modeled below using algebraic tiles.



What are the solutions to the equation $x^2 + x = 6$?

A $x = -3$ and $x = -2$
B $x = -3$ and $x = 2$
C $x = 3$ and $x = -2$
D $x = 3$ and $x = 2$

A(d)(3) Quadratic and other nonlinear functions. The student understands there are situations modeled by functions that are neither linear nor quadratic and models the situations.

(A) The student uses [patterns to generate] the laws of exponents and applies them in problem solving situations.

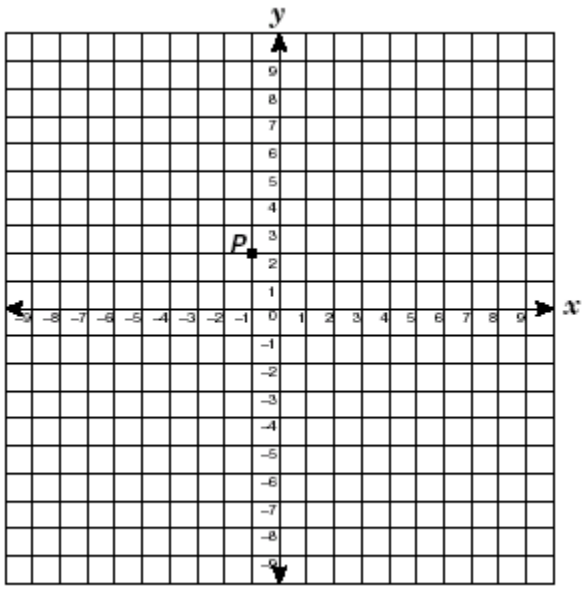
41 The area of a rectangle is $144a^8b^4$ square units. If the width of the rectangle is $8a^2b^2$ units, what is the length in units?

A $18a^6b^2$ units
B $136a^6b^2$ units
C $152a^{10}b^6$ units
D $1152a^{10}b^6$ units

10-Objective 6: The student will demonstrate an understanding of geometric relationships and spatial reasoning.

8.6(B) graph dilations, reflections, and translations on a coordinate plane.

17 Identify the location of point P under translation $(x + 3, y - 2)$.



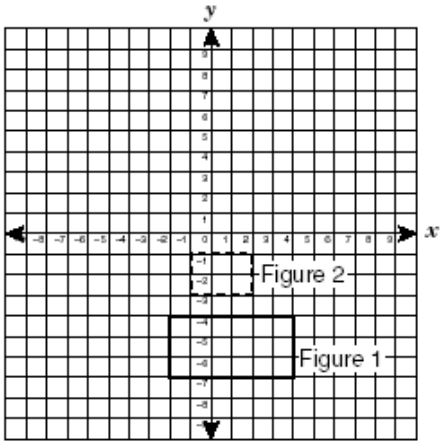
A (3, –2)
B (2, 3)
C (–1, 0)
D (2, 0)

10-Objective 6

8.6(A) generate similar shapes using dilations including enlargements and reductions;

40 Identify the drawing that shows Figure 1 under dilation to produce Figure 2, using center of dilation (0, 0) and a scale factor of $\frac{1}{2}$.

F



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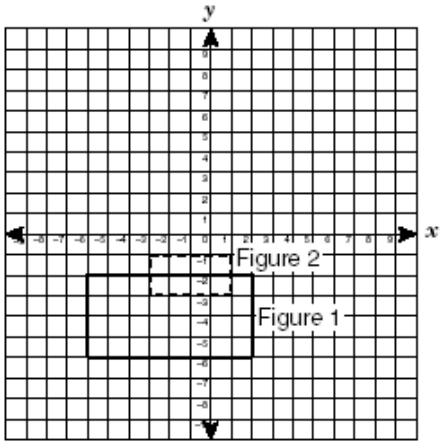

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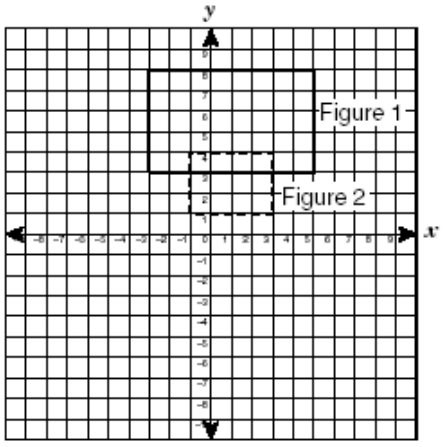

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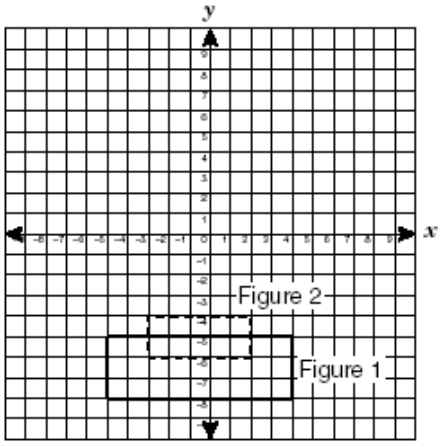
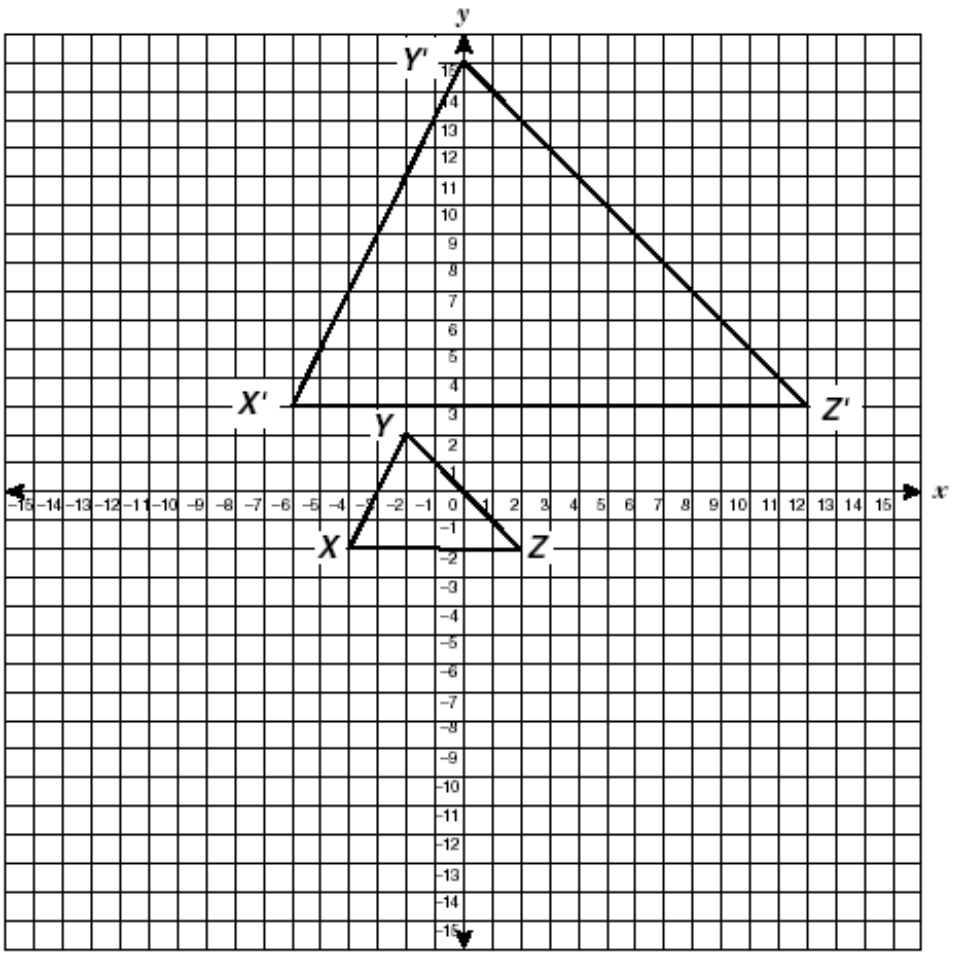


10-Objective 6

8.6(A) generate similar shapes using dilations including enlargements and reductions;

44 The graph below shows ΔXYZ and similar $\Delta X'Y'Z'$.



Which statement is true when transforming ΔXYZ to $\Delta X'Y'Z'$?

F All the corresponding angles will increase by a multiple of 3.

G All the corresponding angles will increase by a scale factor of $\frac{1}{3}$.

H All the corresponding sides are proportional, with a scale factor of 3.

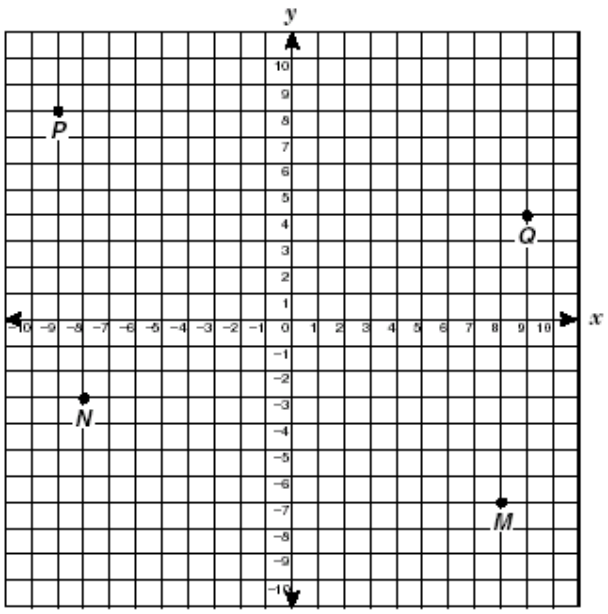
J All the corresponding sides are proportional, with a scale factor of $\frac{1}{3}$.

10-Objective 6

(8.7) Geometry and spatial reasoning. The student uses geometry to model and describe the physical world. The student is expected to

(D) locate and name points on a coordinate plane using ordered pairs of rational numbers.

51 For which point is $x < -\frac{15}{2}$ and $y < -\frac{3}{2}$?

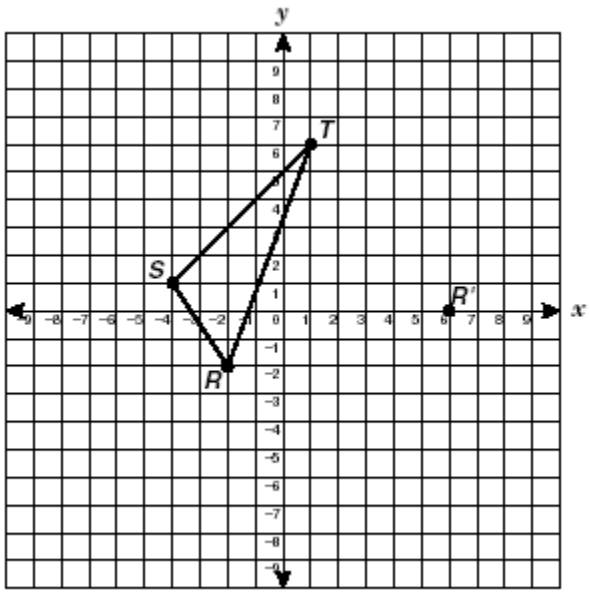


A M
B N
C P
D Q

10-Objective 6

8.6(B) graph dilations, reflections, and translations on a coordinate plane.

54 ΔRST is translated so that R is mapped to R'.



Which set of ordered pairs best identifies points S' and T'?

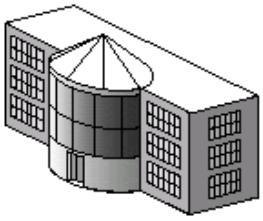
F $S'(8, 3)$, $T'(3, 8)$
G $S'(4, 3)$, $T'(9, 8)$
H $S'(10, -1)$, $T'(12, -9)$
J $S'(10, 3)$, $T'(5, 4)$

10-Objective 7: The student will demonstrate an understanding of two- and three-dimensional representations of geometric relationships and shapes.

(8.7) Geometry and spatial reasoning. The student uses geometry to model and describe the physical world. The student is expected to

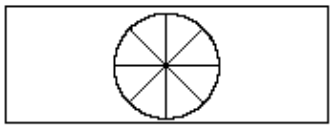
(A) draw solids from different perspectives;

3 The drawing shows a view of a building.

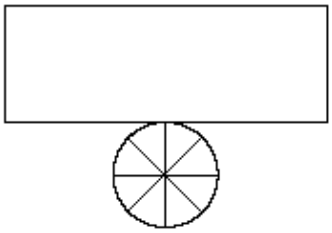


Which drawing best represents the top view of this building?

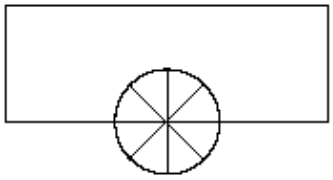
A



C



B



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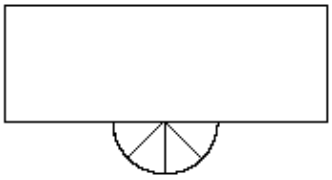


10-Objective 7

8.7(B) use geometric concepts and properties to solve problems in fields such as art and architecture;

12 A blueprint of a house plan uses a scale in which $\frac{1}{4}$ inch equals 1 foot. If the length of one side of the house is 65 feet, how many inches will the length be on the blueprint?

F 4 in.

G $16\frac{1}{4}$ in.

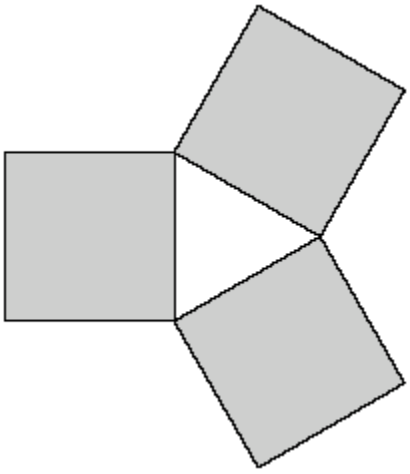
H $65\frac{1}{4}$ in.

J 260 in.

10-Objective 7

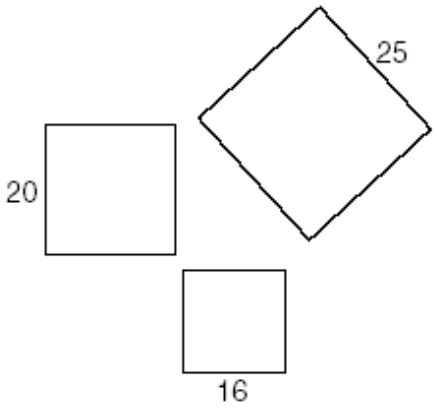
8.7(C) use pictures or models to demonstrate the Pythagorean Theorem.

13 The sides of squares can be used to form triangles. The areas of the squares that form right triangles have a special relationship.

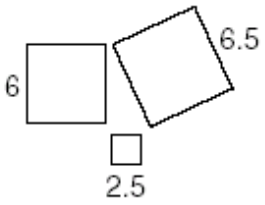


Using the dimensions of the squares shown below, determine which set of squares will form a right triangle.

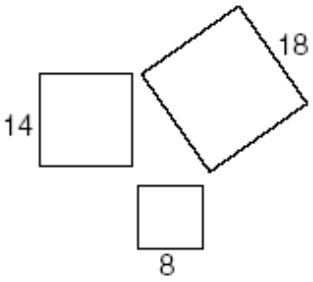
A



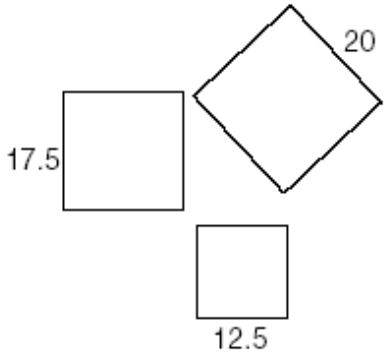
C



B



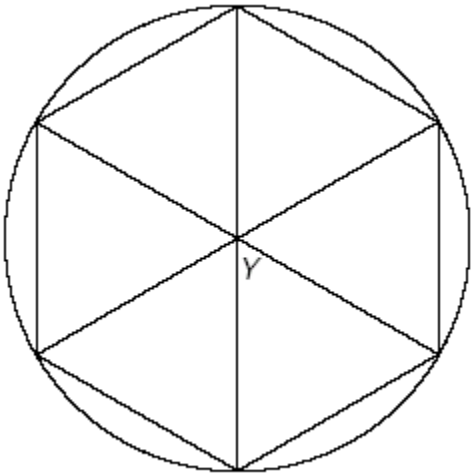
D



10-Objective 7

8.7(B) use geometric concepts and properties to solve problems in fields such as art and architecture;

21 A regular hexagon is drawn in a circle as a design on a window. Opposite vertices are connected by line segments.



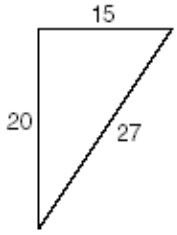
What is the measure of angle *Y* in degrees?

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

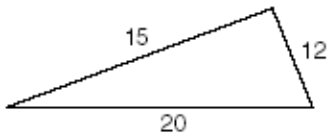
8.7(C) use pictures or models to demonstrate the Pythagorean Theorem.

56 Use the Pythagorean theorem to find the figure that is a right triangle.

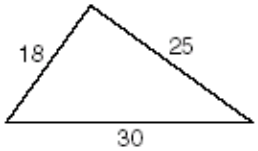
F



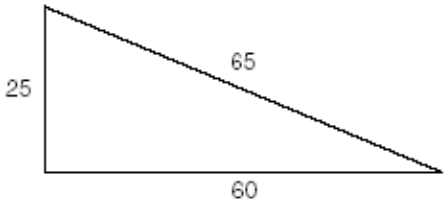
H



G



J

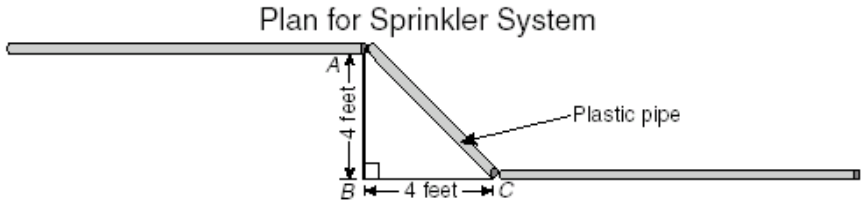


10-Objective 8: The student will demonstrate an understanding of the concepts and uses of measurement and similarity.

(8.9) Measurement. The student uses indirect measurement to solve problems. The student is expected to

(A) use the Pythagorean Theorem to solve real-life problems;

11 The drawing shows part of the plan for a new underground lawn-sprinkler system.

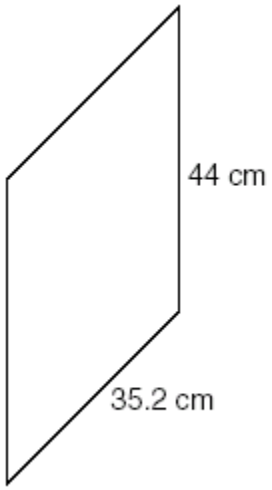


Which is closest to the length of the section of plastic pipe from point *A* to point *C*?

A 4.7 ft
B 5.7 ft
C 6.7 ft
D 7.7 ft

8.9(B) use proportional relationships in similar shapes to find missing measurements.

16 A certain parallelogram has the dimensions shown.



Which set of dimensions would produce a similar figure?

F 17.6 cm, 88 cm
G 70.4 cm, 176 cm
H 105.6 cm, 132 cm
J 140.8 cm, 220 cm

10-Objective 8

(8.10) Measurement. The student describes how changes in dimensions affect linear, area, and volume measures. The student is expected to

(B) describe the resulting effect on volume when dimensions of a solid are changed proportionally.

28 The edges of a large cube are 4 times longer than the edges of a small cube. How many times greater is the volume of the large cube?

F 4 times
G 12 times
H 16 times
J 64 times

(8.8) Measurement. The student uses procedures to determine measures of solids. The student is expected to

(C) estimate answers and use formulas to solve application problems involving surface area and volume.

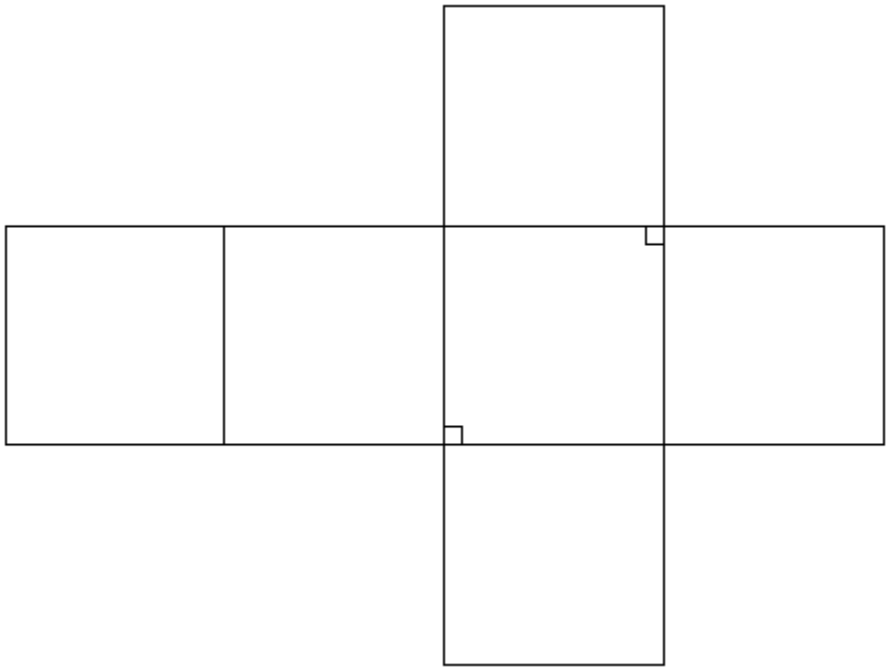
30 Ginny made a cylindrical clay vase for her art project. If the vase has a volume of 339 cubic inches and a diameter of 6 inches, which is closest to the height of the vase?

F 36 in.
G 18 in.
H 12 in.
J 3 in.

10-Objective 8

8.8(B) connect models to formulas for volume of prisms, cylinders, pyramids, and cones;

33 The net of a cube is shown below. Use the ruler on the Mathematics Chart to measure the dimensions of the cube to the nearest quarter inch.



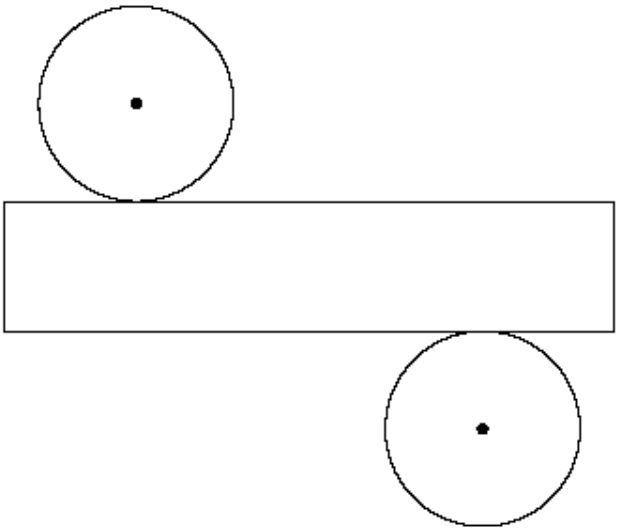
Which best represents the volume of this cube to the nearest cubic inch?

A 2 in. ^{3}
B 9 in. ^{3}
C 12 in. ^{3}
D 18 in. ^{3}

10-Objective 8

8.8(A) find surface area of prisms and cylinders using [concrete] models and nets (two-dimensional models);

50 The net of a cylinder is shown below. Use the ruler on the Mathematics Chart to measure the dimensions of the cylinder to the nearest tenth of a centimeter.



Find the total surface area of this cylinder to the nearest square centimeter.

F 6 cm^2
G 14 cm^2
H 19 cm^2
J 33 cm^2

8.10) Measurement. The student describes how changes in dimensions affect linear, area, and volume measures. The student is expected to

(A) describe the resulting effects on perimeter and area when dimensions of a shape are changed proportionally;

55 The scale of two similar quadrilaterals is 1:2. The perimeter of the smaller quadrilateral is 80 centimeters. What is the perimeter of the larger quadrilateral?

A 40 cm
B 80 cm
C 160 cm
D 320 cm

10-Objective 9: The student will demonstrate an understanding of percents, proportional relationships, probability, and statistics in application problems.

8.3) Patterns, relationships, and algebraic thinking. The student identifies proportional relationships in problem situations and solves problems. The student is expected to

(B) estimate and find solutions to application problems involving percents and proportional relationships such as similarity and rates.

6 The world's fastest flying insect is the dragonfly. It can fly 36 miles per hour. If a dragonfly flew in a straight path at this rate, what distance would it fly in 15 minutes?

F 2 mi
G 9 mi
H 25 mi
J 540 mi

(8.11) Probability and statistics. The student applies concepts of theoretical and experimental probability to make predictions. The student is expected to

(A) find the probabilities of compound events (dependent and independent);

15 Jared has a white cube and a red cube. The surfaces of each cube are numbered with a unique number from 1 to 6. If Jared tosses the cubes, what is the probability he will get a 4 on the white cube and an odd number on the red cube?

A $\frac{1}{12}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{2}{3}$

(8.12) Probability and statistics. The student uses statistical procedures to describe data. The student is expected to

(A) select the appropriate measure of central tendency to describe a set of data for a particular purpose;

18 Given the set of data {20, 15, 10, 20, 15, 10, 20, 20, 50}, which statement best interprets the data?

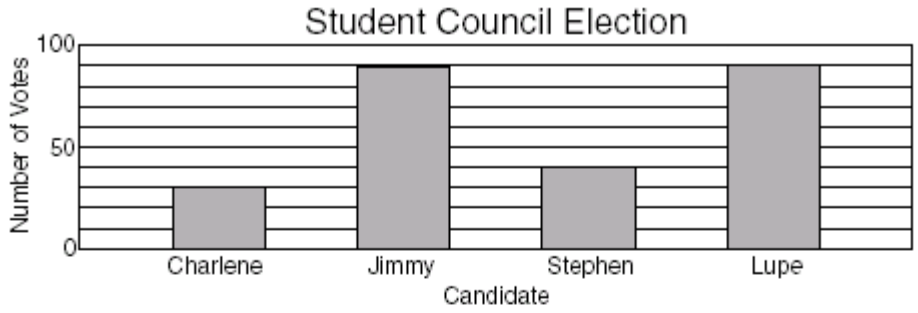
F Only the mean is 20.
G The range of the set of data is 20.
H The mean, median, and mode are all 20.
J The mode and median are not the same.

10-Objective 9

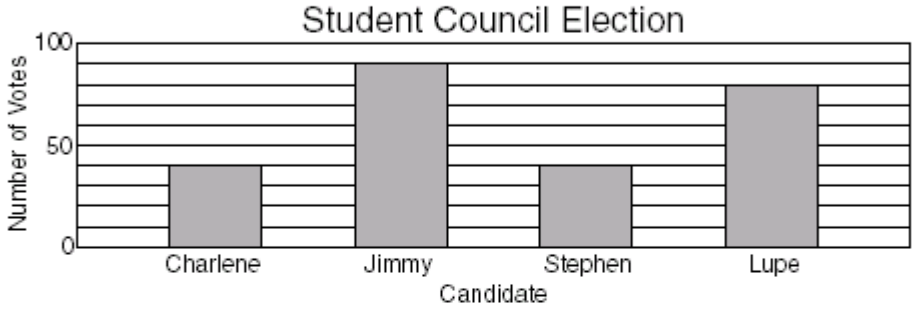
8.12(C) construct circle graphs, bar graphs, and histograms, with and without technology.

39 The student election committee at Chesterfield High School recorded the number of votes that each of 4 presidential candidates received in the student council election. A total of 240 students voted. Charlene received 12.5% of the votes, Jimmy received 33.3%, Stephen received 16.7%, and Lupe received 37.5%. Which bar graph best represents the number of votes each presidential candidate received in the student council election?

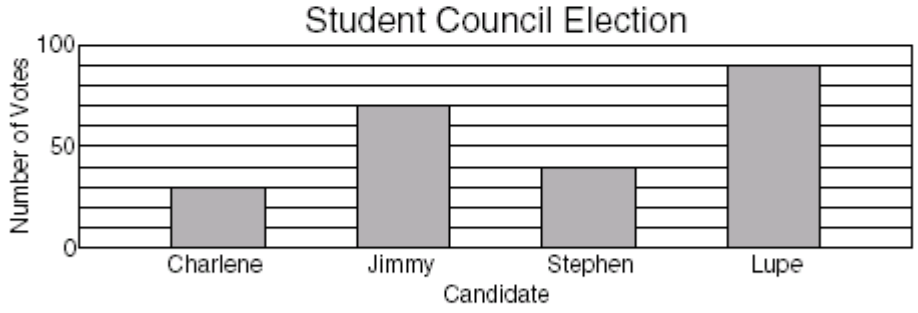
A



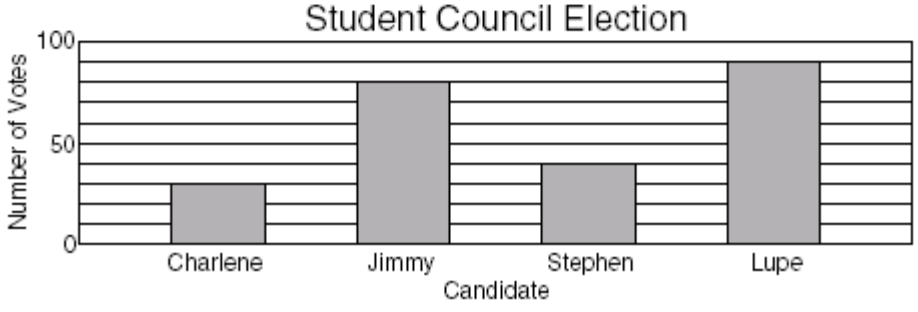
B



C



D



10-Objective 9

8.3(B) estimate and find solutions to application problems involving percents and proportional relationships such as similarity and rates.

42 Mr. Salinas, a real estate agent, received a 5% commission on the selling price of a house. If his commission was $6,975, what was the selling price of the house?

F $7,342
G $34,875
H $139,500
J $662,625

10-Objective 10: The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.

(8.15) Underlying processes and mathematical tools. The student communicates about Grade 8 mathematics through informal and mathematical language, representations, and models. The student is expected to

(A) communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.

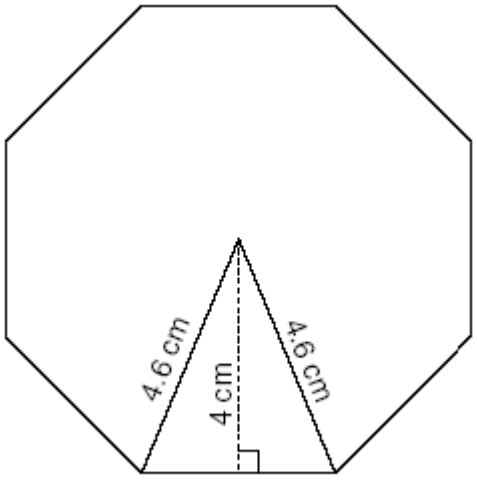
2 Rinaldo's school sold all of the tickets to a band concert. The tickets cost $8 each. The auditorium where the concert was held had 39 rows, with 56 seats in each row. Which of the following is a correct method for Rinaldo to calculate the total amount of ticket sales?

F Rinaldo can multiply 56 by $8 and then add 39.
G Rinaldo can add 39 and 56 and then multiply by $8.
H Rinaldo can multiply 39 and 56 and then multiply by $8.
J Rinaldo can add 56 and $8 and then multiply by 39.

(8.14) Underlying processes and mathematical tools. The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school. The student is expected to

(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;

8 What is the perimeter to the nearest centimeter of the regular octagon drawn below?



F 41 cm
G 36 cm
H 27 cm
J 18 cm

10-Objective 10

(8.16) Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions. The student is expected to

(A) make conjectures from patterns or sets of examples and nonexamples;

23 A pattern exists among the digits in the ones place when 2 is raised to different powers, as shown in the table below. For example, in $2^4 = 16$ the number in the ones place is 6.

Numbers in the Ones Place of Powers of 2

Power of 2	Number in Ones Place
2^1	2
2^2	4
2^3	8
2^4	6
2^5	2
2^6	4
2^7	8
2^8	6
2^9	2

Which digit is in the ones place in 2^{38} ?

A 2
B 4
C 6
D 8

10-Objective 10

(8.15) Underlying processes and mathematical tools.The student communicates about Grade 8 mathematics through informal and mathematical language, representations, and models. The student is expected to

(A) communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.

29 Bob surveyed 10 people about the average number of hours per week they spent in the library last year and the number of books they read last year. The results of the survey are shown in the table.

Time Spent in Library and Books Read

Person	Hours Spent in Library per Week	Number of Books Read Last Year
A	3	3
B	3	0
C	2	3
D	4	4
E	2	5
F	1	3
G	3	2
H	3	6
I	5	8
J	2	2

Which graphic display on the next page would be most helpful to determine whether there is a correlation between the number of hours spent in the library and the number of books read?

10-Objective 10
#29 Continued

A

C

Time Spent in Library and Books Read

Stem	Leaf
1	1
2	3
3	4
4	1
5	1

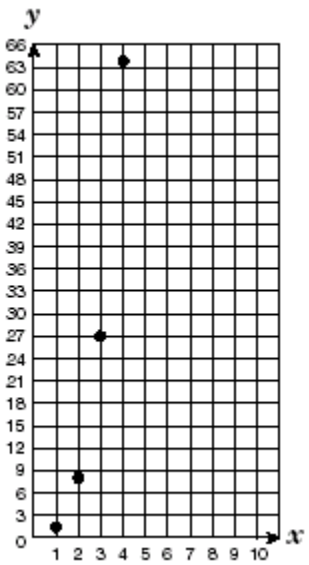
B

D

10-Objective 10

8.15(A) communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.

32 Which of the following is best represented by the data in the graph below?



F Comparing the length of a side of a square to the square's area
G Comparing the length of the radius of a circle to the circle's circumference
H Comparing the length of a side of a cube to the cube's volume
J Comparing the length of the diameter of a circle to the circle's area

8.14(C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.

35 Manuel has 5 more CDs than Pedro has. Bob has twice as many CDs as Manuel has. Altogether the boys have 63 CDs. Which equation can be used to find how many CDs each person has?

A $5x + 2x + x = 63$
B $x + (x + 5) + 2x = 63$
C $x + (x + 5) + 2(x + 5) = 63$
D $x + 2(5x) + 5x = 63$

10-Objective 10

8.14(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;

38 Mitch wants to use 40 feet of fencing to enclose a flower garden. Which of these shapes would use all the fencing and enclose the largest area?

F A rectangle with a length of 8 feet and a width of 12 feet
G An isosceles right triangle with a side length of about 12 feet
H A circle with a radius of about 5.6 feet
J A square with a side length of 10 feet

8.14(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;

48 Jerry and Dan are recycling newspaper for a school project. Together they made 21 stacks of newspaper. Each stack is 4 feet tall. Dan can load a stack in 15 minutes, and Jerry can load a stack in 10 minutes. What information is NOT needed to find whether they can load all the newspaper in 2 hours if they work together?

F The time it takes to load the newspaper
G The rate at which each boy loads the newspaper
H The height of each stack of newspaper
J The number of stacks of newspaper

8.14(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;

52 Greta and her friends are having lunch at Joe's Diner. The total cost of their lunch, including tax, is $54.63. Greta and her friends have $65.00 altogether and want to leave a tip equal to 15% of the total bill. Is $65.00 enough to cover the cost of their lunch and the 15% tip for the server?

F No, they need $0.56 more.
G No, they need $3.29 more.
H Yes, and they have $2.18 left over.
J Yes, they have the exact amount.

Texas Assessment of Knowledge and Skills - Answer Key

Grade: 10
Subject: Mathematics
Administration: Spring 2003

Item Number	Correct Answer	Objective Measured	Student Expectations
01	C	05	A.D1 (D)
02	H	10	8.15 (A)
03	B	07	8.7 (A)
04	H	04	A.C3 (A)
05	B	01	A.B1 (E)
06	G	09	8.3 (B)
07	A	01	A.B1 (C)
08	G	10	8.14 (B)
09	A	03	A.C2 (D)
10	F	02	A.B4 (B)
11	B	08	8.9 (A)
12	G	07	8.7 (B)
13	C	07	8.7 (C)
14	G	02	A.B2 (B)
15	A	09	8.11 (A)
16	H	08	8.9 (B)
17	D	06	8.6 (B)
18	H	09	8.12 (A)
19	B	01	A.B1 (A)
20	H	04	A.C4 (A)
21	60	07	8.7 (B)
22	F	05	A.D1 (B)
23	B	10	8.16 (A)
24	H	03	A.C2 (C)
25	D	05	A.D2 (B)
26	J	03	A.C2 (E)
27	B	05	A.D2 (A)
28	J	08	8.10 (B)
29	A	10	8.15 (A)
30	H	08	8.8 (C)
31	D	02	A.B4 (A)
32	H	10	8.15 (A)
33	A	08	8.8 (B)
34	H	04	A.C3 (B)
35	C	10	8.14 (C)
36	J	04	A.C4 (B)
37	C	02	A.B4 (A)
38	J	10	8.14 (B)
39	D	09	8.12 (C)
40	H	06	8.6 (A)
41	A	05	A.D3 (A)
42	H	09	8.3 (B)
43	D	01	A.B1 (D)
44	H	06	8.6 (A)
45	D	01	A.B1 (B)
46	J	03	A.C2 (A)
47	A	04	A.C4 (B)
48	H	10	8.14 (A)
49	B	03	A.C1 (C)
50	J	08	8.8 (A)
51	B	06	8.7 (D)
52	H	10	8.14 (A)
53	C	02	A.B3 (A)
54	G	06	8.6 (B)
55	C	08	8.10 (A)
56	J	07	8.7 (C)