7th Grade Practice test

Objective numbers correspond to the State Priority Academic Student Skills (PASS) standards and objectives. This number is also in parentheses following the local objective's verbal description on the pacing guide and on student benchmark reports.

Objective 1.1

1.

Which equation demonstrates the identity property of multiplication?

A $-\frac{3}{4}x \cdot 1 = -\frac{3}{4}x$

B $\frac{1}{2}(x+4) = \frac{1}{2}x + \frac{1}{2}(4)$

C $\frac{2}{3}n \cdot 0 = 0$

D $-\frac{1}{5} \cdot (3n \cdot 2) = (-\frac{1}{5} \cdot 3n) \cdot 2$

2.

Which equation demonstrates the distributive property?

A $x \cdot 3 = 3 \cdot x$

B $4(n \cdot 6) = 4n \cdot 6$

C $3(x+4) = 3x + 12$

D $n \cdot \frac{1}{n} = 1$

3.

Which equation demonstrates the commutative property of multiplication?

A $x \cdot \frac{1}{x} = 1$

B $6x \cdot 3 = 3 \cdot 6x$

C $3(4m \cdot 5) = 12m \cdot 15$

D $12 \cdot (n \cdot 2) = (12 \cdot n) \cdot 2$

4.

$$4(x + 3)$$

Which of these is equivalent to the expression shown above?

A $4x + 3$

B $4x + 4$

C $4x + 7$

D $4x + 12$

5.

Which properties are demonstrated in these steps?

$$\begin{aligned} (5 + 0) + 4x &= 5 + 4x && \text{Step 1} \\ &= 4x + 5 && \text{Step 2} \end{aligned}$$

A Step 1: Inverse
Step 2: Commutative

B Step 1: Identity
Step 2: Associative

C Step 1: Identity
Step 2: Commutative

D Step 1: Inverse
Step 2: Associative

Objective 1.2

6.

What is the solution to this equation?

$$5x = 35$$

A $x = 40$

B $x = 30$

C $x = 7$

D $x = 3$

7.

Which point is found on the line represented by the equation $y + 6 = x$?

A $(-5, 1)$

B $(2, -4)$

C $(3, 9)$

D $(6, 6)$

8.

Which equation is equivalent to $y - 3 = x$?

A $y = -3x$

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

C $y = 3 - x$

D $y = x + 3$

9.

John had a jar that contained x dimes. He put another 58 dimes in the jar and now has a total of 84 dimes. Which equation could be used to find x, the number of dimes John had in the jar originally?

A $x + 58 = 84$

B $x - 58 = 84$

C $x - 84 = 58$

D $84 + x = 58$

10.

Vicki sold 48 picture frames at a craft fair and had 36 left. Which equation could be used to find n, the number of picture frames Vicki originally had?

A $n + 36 = -48$

B $n - 36 = 48$

C $n + 48 = 36$

D $n - 48 = -36$

Objective 2.1a

11.

Which of these lists of integers is in order from greatest to least?

A $-8, -5, -3, 0$

B $-7, 5, 2, -1$

C $8, 5, -7, -4$

D $3, 0, -1, -6$

12.

The table shows the mean temperatures for each of five days during one week last winter.

Mean Temperatures

Day	Temperature (°F)
Monday	7
Tuesday	−2
Wednesday	−1
Thursday	4
Friday	0

Which lists the weekdays in order from the day with the lowest mean temperature to the day with the highest mean temperature?

A Friday, Wednesday, Tuesday, Thursday, Monday

B Tuesday, Wednesday, Friday, Thursday, Monday

C Friday, Tuesday, Wednesday, Thursday, Monday

D Tuesday, Friday, Wednesday, Thursday, Monday

Objective 2.1b

13.

Chad works at a flower shop located on the 80th floor of a building. He went down 60 floors to deliver flowers, back up 15 floors, and finally down 2 floors to make a third delivery. Which floor was Chad on when he made the third delivery?

A 33rd

B 35th

C 37th

D 47th

14.

Theresa had $1,000 in her checking account and a balance of $800 to pay on a loan. Theresa used money from her checking account to make a payment that decreased her loan to half of the balance. What is her new checking account balance?

A $200

B $400

C $500

D $600

15.

The table lists all of the deposits and withdrawals Harold made to his bank account during the month of March.

Harold's Bank Account

Date	Action	Amount
March 5	deposit	$75
March 12	deposit	$115
March 17	withdrawal	$90
March 22	deposit	$115
March 30	withdrawal	$80

If there was $450 in Harold's bank account on March 1, what was his bank account balance at the end of March?

A $315

B $475

C $585

D $745

Objective 2.2b

16.

There are 42 students in Kim's band class. Of those students, 31 are girls. Which proportion can be used to find x, the percent of students in the class that are boys?

A $\frac{31}{42} = \frac{x}{100}$

B $\frac{11}{31} = \frac{x}{100}$

C $\frac{31}{11} = \frac{x}{100}$

D $\frac{11}{42} = \frac{x}{100}$

17.

The ratio of time Tim spends on math homework to science homework is 5 to 4. If he spends 40 minutes on math homework, how many minutes does he spend on science homework?

A 20 minutes

B 32 minutes

C 60 minutes

D 90 minutes

Objective 2.2c

18.

Ronnie's Furniture Store had a sale on Saturday. Every item was reduced by 15%. Mike purchased these items.

Original Prices

- **one couch for $199.99**
- **two tables for $149.99 each**
- **one lamp for $99.99**

Which amount is <u>closest</u> to the total cost of Mike's purchases after the 15% discount and including the 6% sales tax?

A $410

B $510

C $540

D $640

19.

Steven earns $12 an hour plus a 15% commission from every sale that he makes. During a two-week period, Steven worked 80 hours and made a total of $1,300 in sales. What was the total amount of Steven's paycheck for the two-week period?

A $1,155

B $1,495

C $2,260

D $2,340

Objective 2.3b

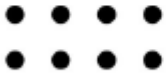
20.

Which model represents 3^2?

A

B

C



D

21.

Which of these models can be used to represent the area of a square with a side length of $\sqrt{4}$?

A

B

C

D

22.

Josh has 56 identical square tiles. Which change would best allow Josh to combine all of the square tiles he has to create a single square?

A adding 6 tiles to the 56 he has

B adding 7 tiles to the 56 he has

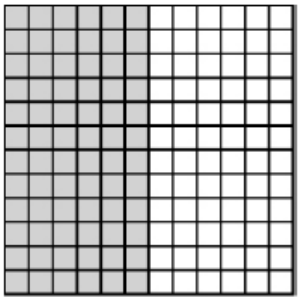
C subtracting 6 tiles from the 56 he has

D subtracting 7 tiles from the 56 he has

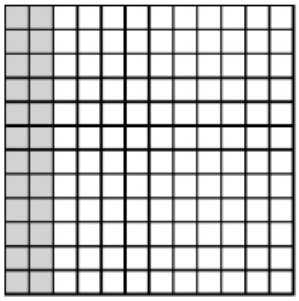
23.

Which model is shaded to represent $\sqrt{144}$?

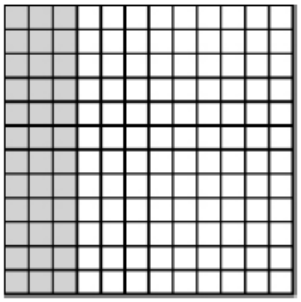
A



C



B



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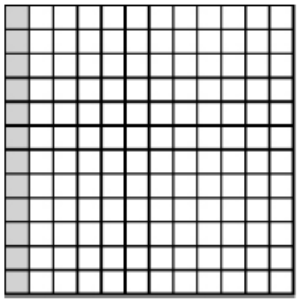


Objective 2.3c

24.

The square root of 154 is between which two integers?

A 11 and 12

B 12 and 13

C 14 and 15

D 15 and 16

25.

Which whole number is closest to the value of $\sqrt{126}$?

A 10

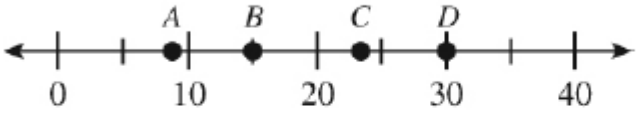
B 11

C 12

D 13

26.

Which point is closest to the value of $\sqrt{905}$ on the number line?



A point *A*

B point *B*

C point *C*

D point *D*

Objective 3.1a

27.

Leticia drew a triangle with exactly two sides of equal length. What type of triangle did Leticia draw?

A scalene

B isosceles

C equilateral

D equiangular

28.

Which kind of triangle has angles with these three measures?

45°, 45°, and 90°

A equilateral

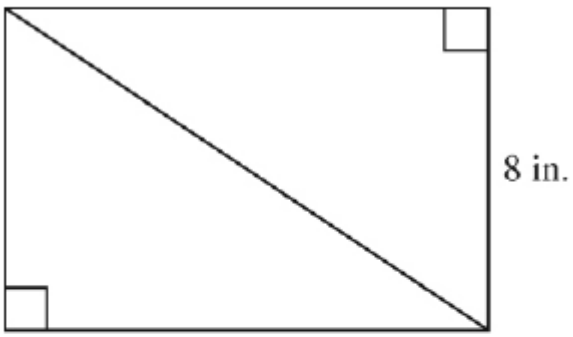
B obtuse

C right

D acute

29.

The figure shows a rectangle divided into two congruent triangles.



Which term <u>best</u> describes these triangles?

A equilateral

B isosceles

C scalene

D obtuse

30.

Which type of triangle is <u>always</u> similar to all other triangles of the same type?

A acute

B right

C scalene

D equilateral

Objective 3.1b

31.

Penny drew a quadrilateral with these characteristics.

- **all sides are of equal length**
- **the opposite sides are parallel**
- **two angles are acute**

What type of quadrilateral did Penny draw?

A rhombus

B rectangle

C square

D trapezoid

32.

Which term <u>best</u> describes this quadrilateral?

A trapezoid

B rectangle

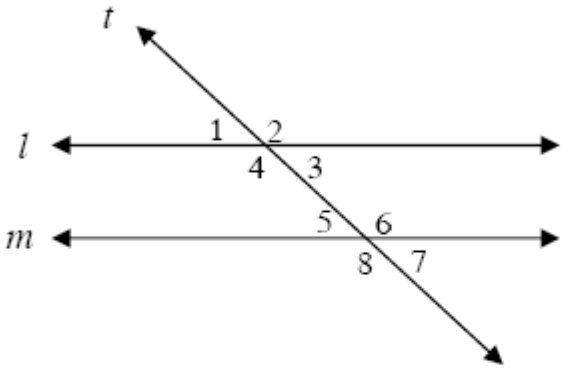
C rhombus

D square

Objective 3.2

33.

The drawing shows parallel lines *l* and *m* intersected by transversal *t*.



Which statement about angles 2 and 4 is true?

A They are interior angles.

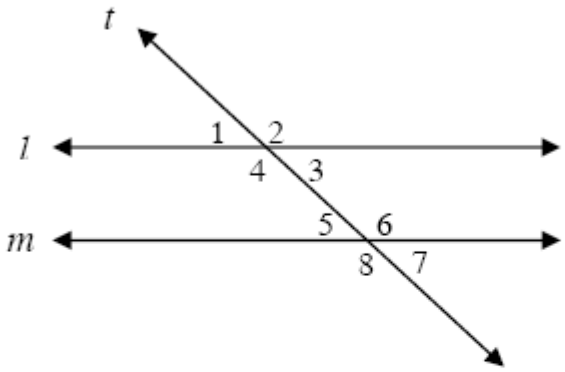
B They are vertical angles.

C They are corresponding angles.

D They are complementary angles.

34.

The drawing shows parallel lines l and m intersected by transversal t.



Which statement best describes angles 1 and 5?

A They are interior angles.

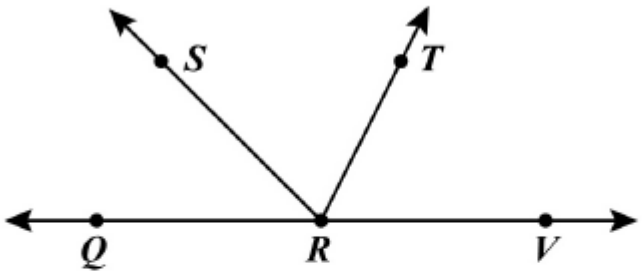
B They are vertical angles.

C They are complementary angles.

D They are corresponding angles.

35.

In this drawing, two rays begin at point R on line QV.



Which statement about $\angle QRS$ and $\angle VRS$ is true?

A They are vertical angles.

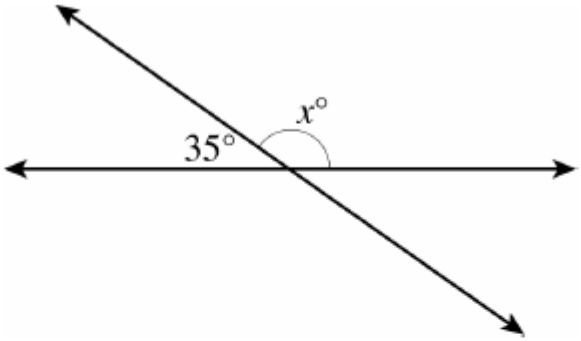
B They are obtuse angles.

C They are supplementary angles.

D They are complementary angles.

36.

Two lines intersect at a 35° angle, as shown.



What is the value of x?

A 35

B 55

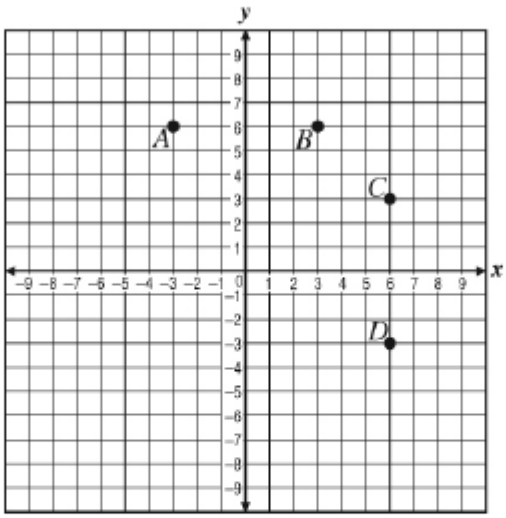
C 145

D 165

Objective 3.3a

37.

Which point <u>best</u> represents the ordered pair (–3, 6) on this coordinate grid?



A point *A*

B point *B*

C point *C*

D point *D*

38.

Point *K* is located at (–3, 8) on a coordinate plane. In which quadrant is point *K* located?

A quadrant IV

B quadrant III

C quadrant II

D quadrant I

Objective 3.3b
39.

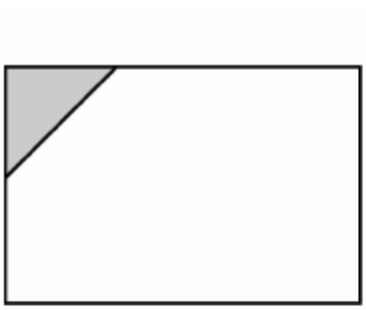


Figure 1

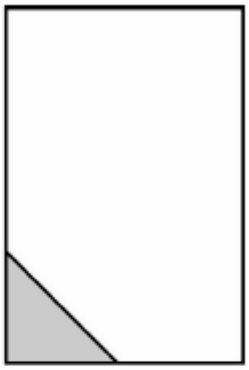


Figure 2

Which <u>best</u> describes the one-step transformation in position from Figure 1 to Figure 2?

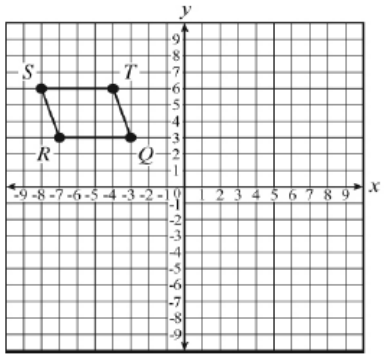
A reflection

B translation

C rotation

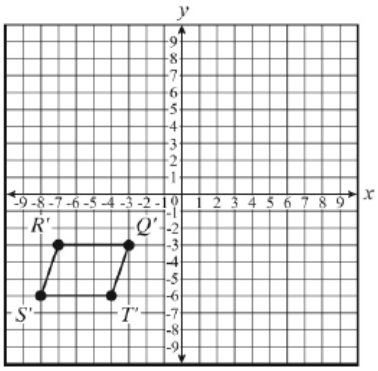
D dilation

40.

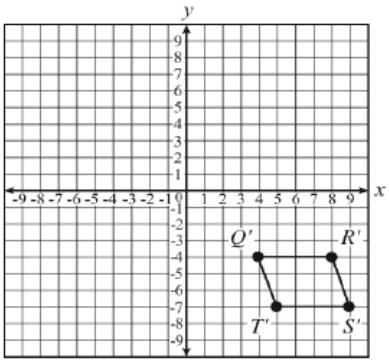


Which <u>best</u> shows the position of the parallelogram *QRST* after it is reflected across the *y*-axis to form parallelogram *Q′R′S′T′*?

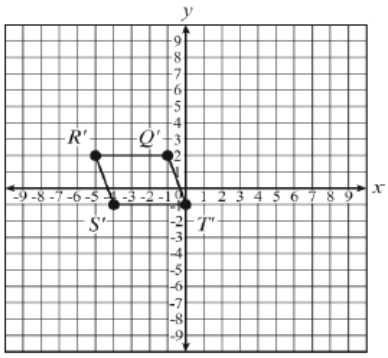
A



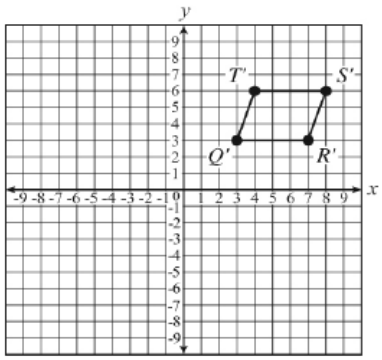
C



B

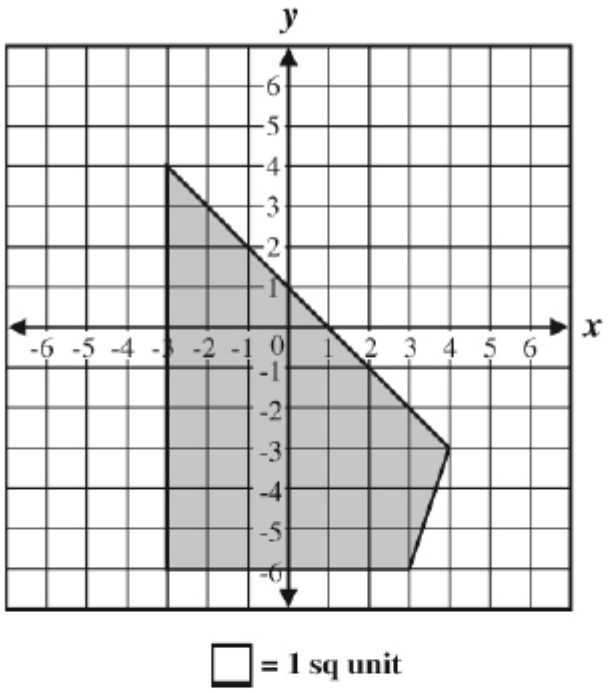


D



Objective 4.1a
41.

The shaded figure on the grid is a quadrilateral.



Which is <u>closest</u> to the area, in square units, of the quadrilateral?

A 39 sq units

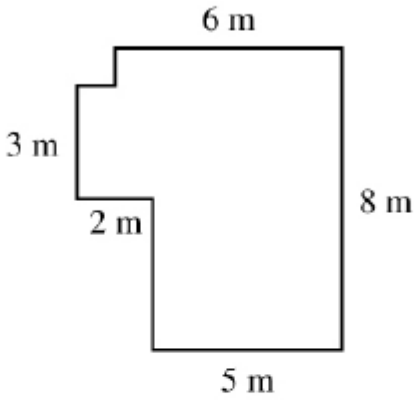
B $42\frac{1}{2}$ sq units

C 44 sq units

D $45\frac{1}{2}$ sq units

42.

The figure shown is made up of line segments that meet at right angles.



What is the perimeter of the figure in meters (m)?

A 24 m

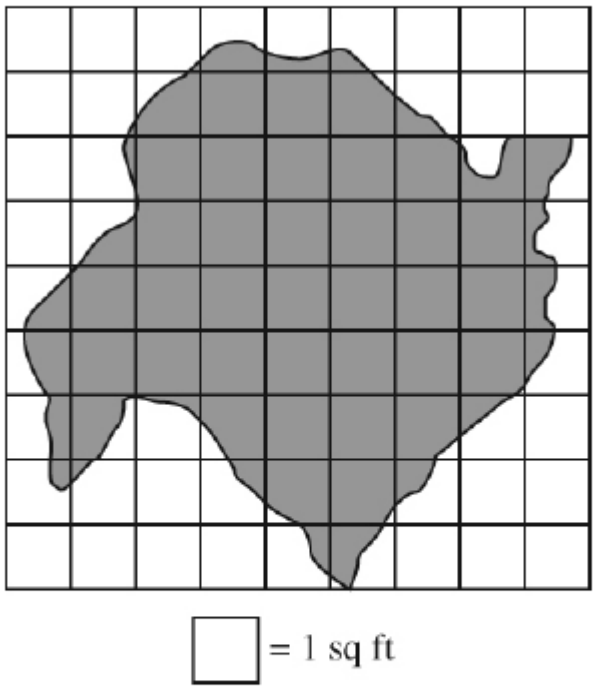
B 26 m

C 28 m

D 30 m

43.

Which measure is closest to the area of this shaded figure in square feet (sq ft)?



A 32 sq ft

B 41 sq ft

C 56 sq ft

D 68 sq ft

Objective 4.1b

44.

The length of a parallelogram is 18 inches. If the perimeter of the parallelogram is 60 inches, what is the width, in inches (in.)?

A 12 in.

B 21 in.

C 24 in.

D 42 in.

45.

Tomas used a string with a piece of chalk tied to one end to draw a circle on the sidewalk. He held one end of the string on the sidewalk and then drew the circle using the chalk tied to the other end. The area of the circle was about 113 square inches. Which is <u>closest</u> to the length of the string?

$$A_{\text{circle}} = \pi r^2$$

A 6 in.

B 12 in.

C 18 in.

D 36 in.

Objective 4.2a

46.

Which is the <u>most</u> reasonable length for a new pencil?

A 19 millimeters

B 19 centimeters

C 19 meters

D 19 kilometers

47.

Which measurement represents a reasonable amount of water needed to completely fill a standard bathroom sink?

A 2 cups

B 2 pints

C 2 ounces

D 2 gallons

Objective 4.2b

48.

Mary bought a 3-liter bottle of lemon-lime soda. Which is <u>closest</u> to the number of ounces (oz) of soda in the bottle when it is half full?

4 liters $\approx$ 128 ounces

A 24 oz

B 32 oz

C 48 oz

D 96 oz

49.

Lee Ann is the tallest girl on the 10th-grade basketball team. Her height is 1.8 meters. Which is closest to Lee Ann's height in inches (in.)?

1 meter $\approx$ 39 inches

A 50 in.

B 60 in.

C 70 in.

D 80 in.

Objective 5.1
50.

A spinner is divided into 4 sections of different sizes and colors. The table shows the results of spinning the pointer 100 times.

Results of 100 Spins

Color of Section	Number of Times
green	20
red	30
blue	40
yellow	10

Based on these results, what is the probability that the pointer will stop on blue on the next spin?

A $\frac{1}{10}$

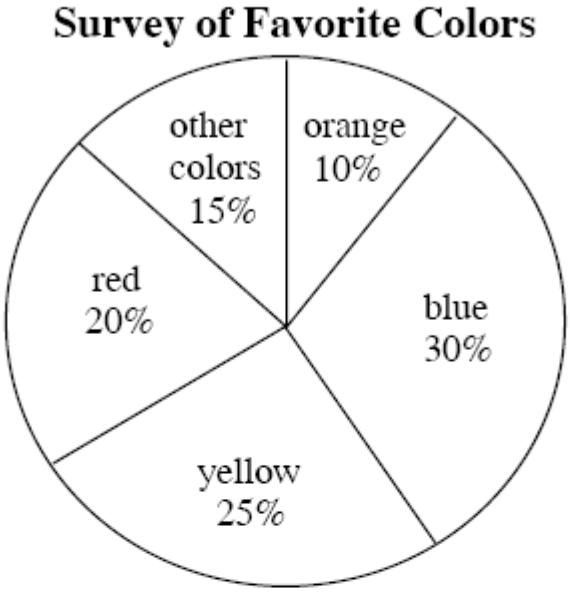
B $\frac{3}{10}$

C $\frac{2}{5}$

D $\frac{3}{5}$

51.

A survey was conducted to determine the favorite colors of 120 seventh-grade students. The circle graph shows the results of the survey.



A student will be selected at random from the 120 students surveyed. Based on the graph, what is the probability that the student's favorite color will be blue?

A $\frac{1}{5}$

B $\frac{1}{4}$

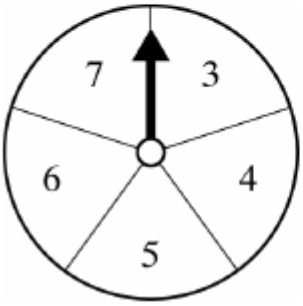
C $\frac{3}{10}$

D $\frac{1}{36}$

52.

Which of these fair spinners has the highest probability of the arrow landing on an even number?

A



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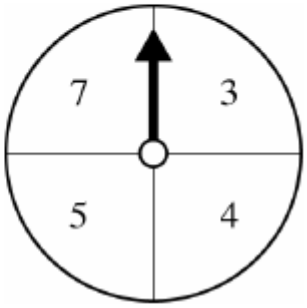
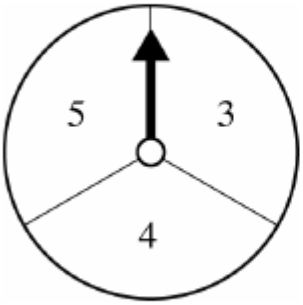
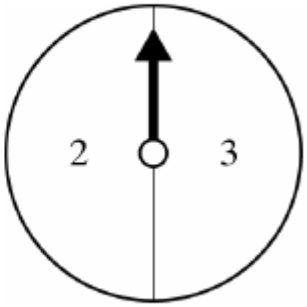


B



D



53.

A local sandwich shop offers the choices shown for their lunch special. Jamie wants to order 1 sandwich.

Sandwich Choices

Meat	Sandwich Spread	Bread
ham	mustard	wheat
turkey	mayonnaise	white
chicken	ketchup	

How many possible sandwiches can Jamie make using 1 type of meat, 1 sandwich spread, and 1 type of bread?

A 3

B 6

C 12

D 18

Objective 5.2

54.

When Norma bought lunch at a restaurant, she was given a scratch-off game card with this statement:

1 out of 8 cards is a winner!

What is the probability that Norma did not receive a winning game card?

A 8%

B 12.5%

C 87.5%

D 92%

55.

The prize wheel at the school fair is divided into 6 sections of equal size. The sections are numbered 1 through 6.

If the arrow is spun once, what is the probability that it will stop on a section labeled with an even number divisible by 3 or a section labeled with an odd number?

A $\frac{1}{6}$

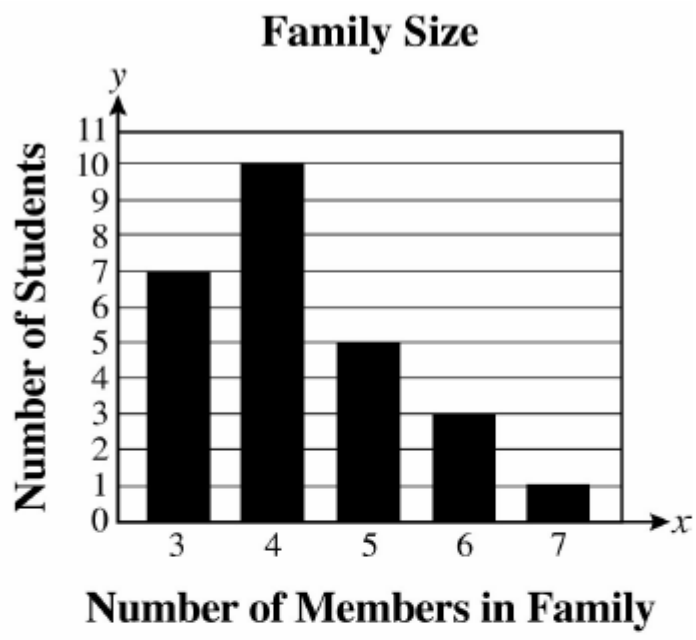
B $\frac{1}{2}$

C $\frac{2}{3}$

D $\frac{5}{6}$

56.

The graph shows the results of a survey given to a group of students.



If one student is picked at random, what is the probability that the student has a family with 6 or 7 members?

A $\frac{1}{26}$

B $\frac{3}{26}$

C $\frac{4}{26}$

D $\frac{7}{26}$

57.

As part of a probability experiment, Susannah rolled two fair number cubes, one after the other. Each cube had its faces numbered 1 through 6. What is the probability that the first cube landed on 5 and the second cube landed on 6?

A $\frac{1}{6}$

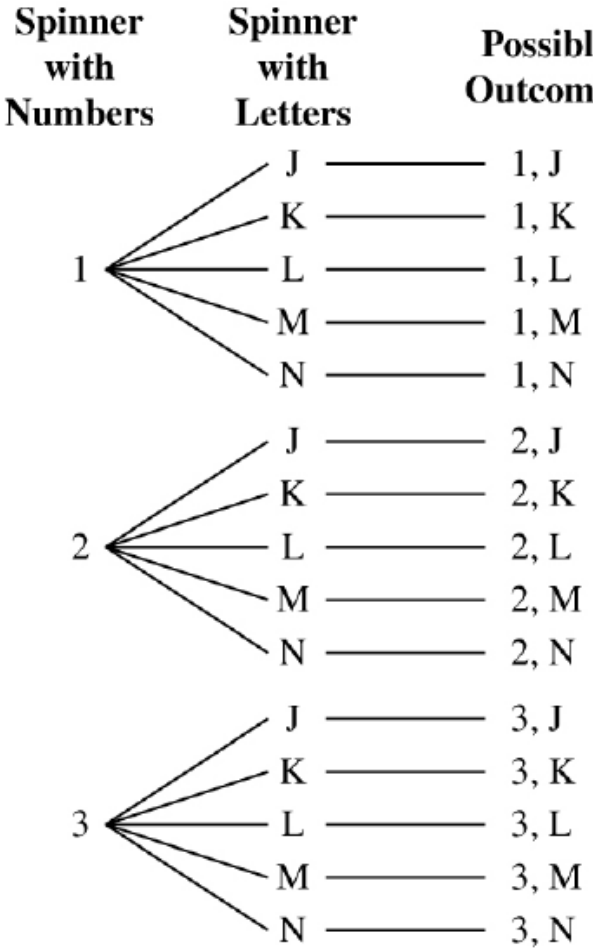
B $\frac{1}{12}$

C $\frac{1}{18}$

D $\frac{1}{36}$

58.

Pam is playing a game with two spinners. One spinner has 3 sections of equal size, each labeled with a number 1 through 3. The other spinner has 5 sections of equal size, each labeled with a letter J through N. She drew this tree diagram to show the possible outcomes.



What is the probability of the arrow on either spinner landing on a 2 <u>or</u> a K on the next spin?

A $\frac{1}{5}$

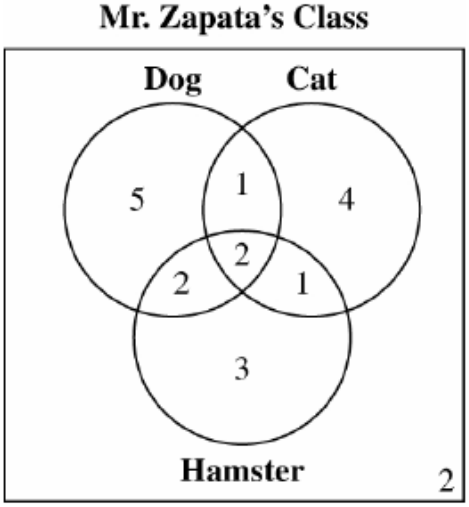
B $\frac{1}{3}$

C $\frac{7}{15}$

D $\frac{8}{15}$

59.

There are 20 students in Mr. Zapata's class. The Venn diagram shows the pets that some of the students have.



If Mr. Zapata chooses a student at random, what is the probability that the student has a dog or a cat?

A $\frac{3}{20}$

B $\frac{9}{20}$

C $\frac{3}{4}$

D $\frac{5}{6}$

Objective 5.3

60.

If digits cannot be repeated, how many different 2-digit numbers can be made from the digits in this set?

{1, 2, 3}

A 3 numbers

B 4 numbers

C 6 numbers

D 9 numbers

61.

Redland Middle School has 6 students who are finalists in the spelling contest. In how many different orders could 3 of these students finish in 1st, 2nd, and 3rd place?

A 15 orders

B 18 orders

C 120 orders

D 216 orders

62.

A school club has 5 members. From these 5 members, a 2-person team must be chosen to represent the club at a school carnival. How many different 2-person teams can be made from the 5 club members?

A 10 teams

B 15 teams

C 20 teams

D 25 teams

63.

Amy has 9 different compact discs. She can place 3 compact discs in her CD player. How many different groups of 3 compact discs could Amy place in her CD player?

A 12 groups

B 27 groups

C 81 groups

D 84 groups

64.

Emilio is coloring a map of the United States. He can choose a group of 5 colors from a total of 9 different colors. Which expression represents the number of different groups that Emilio can choose?

A $\frac{9 \cdot 8 \cdot 7 \cdot 6 \cdot 5}{(9-5)!}$

B $\frac{9 \cdot 8 \cdot 7 \cdot 6 \cdot 5}{5!}$

C $\frac{9!}{(9-5)!}$

D $\frac{9!}{5!}$

#	Answer	DOK	#	Answer	DOK	#	Answer	DOK	#	Answer	DOK
1	A	1	17	B	2	33	B	1	49	C	2
2	C	1	18	C	3	34	D	1	50	C	1
3	B	1	19	A	3	35	C	1	51	C	2
4	D	2	20	A	1	36	C	2	52	D	3
5	C	3	21	D	2	37	A	1	53	D	2
6	C	1	22	D	3	38	C	1	54	C	2
7	B	2	23	D	2	39	C	1	55	C	2
8	D	2	24	B	2	40	D	2	56	C	2
9	A	2	25	B	2	41	C	2	57	D	2
10	B	3	26	D	3	42	D	2	58	C	2
11	D	2	27	B	1	43	B	3	59	C	2
12	B	1	28	C	1	44	A	2	60	C	2
13	A	2	29	C	2	45	A	3	61	C	2
14	D	3	30	D	3	46	B	1	62	A	3
15	C	2	31	A	3	47	D	1	63	D	3
16	D	2	32	B	1	48	C	3	64	B	2