

Grade 6 Mathematics Part B Online Practice Test - 1999

(Adapted from the 1999 Grade 6 Mathematics Achievement Test)

Grade 6 Mathematics Part B Online Practice Test - 1999 (Adapted from the 1999 Grade 6 Mathematics Achievement Test)

This test has one section containing 50 multiple-choice questions, each with a value of one mark

This test is designed to be completed in 60 minutes; however, you may have an additional 30 minutes to complete the test, if you need it.

Instructions

- Read each question carefully.
- You may use manipulatives, including calculators, when answering the questions, but they are not necessary.
- Try to answer all the questions. If you cannot answer a question, go on to the next one. Click on the "Score Test!" button on the last page to get your score.

Multiple Choice

- Each question has four possible answers from which you are to choose the **correct** or **best** answer.
- Locate the circle next to the letter that corresponds to your choice and click on it with your mouse's left button. The circle will fill in. In order to change your answer, click on a different circle. Try the example below.

Example

This examination is for the subject of

- A. mathematics
- B. science
- C. language arts
- D. social studies

Copyright 2004, the Crown in Right of Alberta, as represented by the Minister of Learning, Alberta Learning, Learner Assessment Branch, 44 Capital Boulevard, 10044 108 Street NW, Edmonton, Alberta T5J 5E6, and its licensors. All rights reserved.

Special permission is granted to **Alberta educators only** to reproduce, for educational purposes and on a non-profit basis, parts of this test that do **not** contain excerpted material **only after the administration of this test**.

Excerpted material in this test **shall not** be reproduced without the written permission of the original publisher (see credits page, where applicable).

Archeological Dig

A number of people volunteer to work at an archeological dig during their vacation.

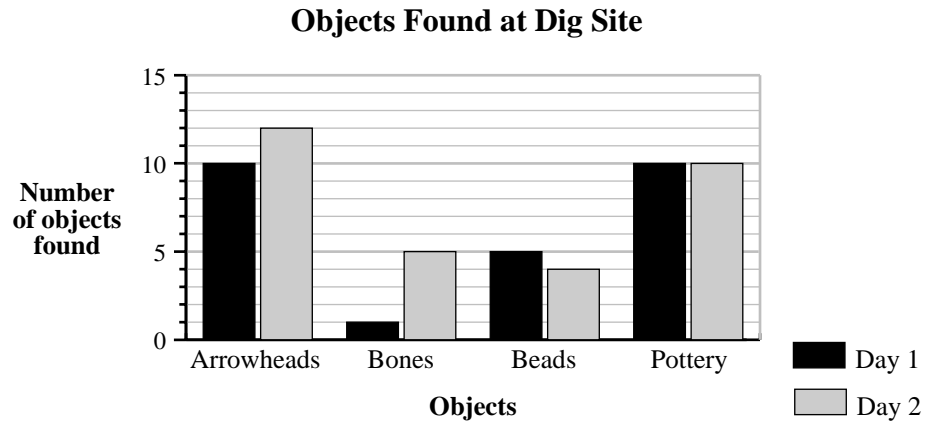
This graphic has been removed because copyright clearance was not granted.

The next eight questions are about activities at the dig site.

1. There are 28 volunteers on the dig team. If each volunteer moves 3 L of soil each hour, how much soil can the team move in 4 h?
 - A. 120 L
 - B. 336 L
 - C. 350 L
 - D. 844 L

Use the following information to answer question 2.

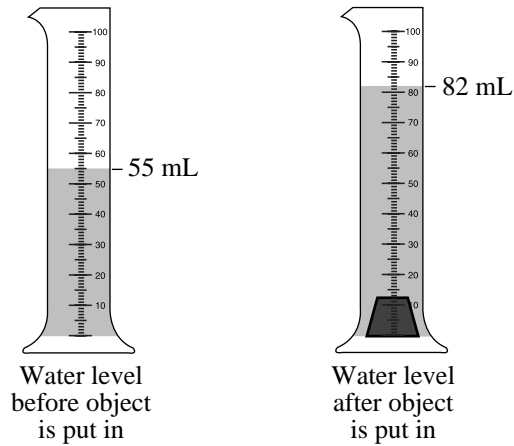
One person graphed the number of objects found at the dig site on two different days.



2. The total number of objects that the team found on the first day was
- A. 10
 - B. 26
 - C. 31
 - D. 57

Use the following information to answer question 3.

Vicki found the volume of an object by measuring the amount of water that the object displaces.



3. What is the volume of the object?

- A. 137 cm^3
 - B. 82 cm^3
 - C. 55 cm^3
 - D. 27 cm^3
-

4. Jenny found a bone with a mass of 1.4 kg. How many grams is this?

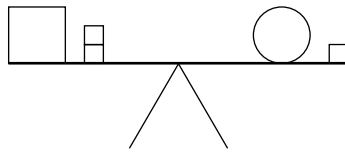
- A. 14 g
- B. 140 g
- C. 1 400 g
- D. 14 000 g

Use the following information to answer question 5.

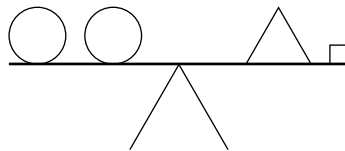
The team members compare items found at the dig site in many ways.

Matt found beads of different shapes and mass. He compared the mass of the beads by using a balance scale, as shown below.


First Comparison





Second Comparison




Mass and shape of
beads found

 = 1 g

 = 3 g

 = ? g

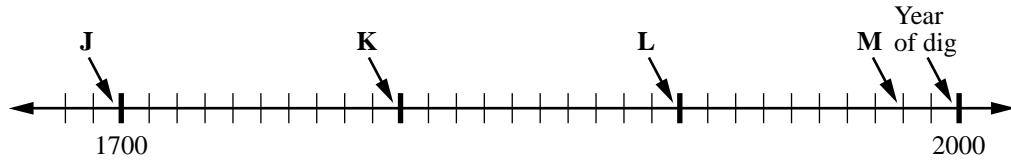
 = ? g

5. What is the mass of the triangular bead?

- A. 3 g
- B. 4 g
- C. 7 g
- D. 8 g

Use the following time-line to answer question 6.

In a pottery jar, a team member found a note. He recorded the year that the note was written on a time-line that he had constructed.



6. If the note was written about 2 centuries ago, what letter on the time-line represents the approximate year that the note was written?

- A. J
- B. K
- C. L
- D. M

Use the following information to answer questions 7 and 8.

One day, the archeologist bought ice-cream treats for the dig team. Their order was as follows:

Ice-Cream Treats	Quantity Bought
Jumbo Snow	4
Frozen Juice	10
Nice Ice Cream	4
I Scream	6
Waffle Cone	4

Price List

Jumbo Snow	\$2.01
Frozen Juice	\$0.98
Nice Ice Cream.....	\$1.12
I Scream.....	\$1.20
Waffle Cone	\$2.49

7. What is the difference in cost between the most expensive treat on the price list and the least expensive treat?
- A. \$1.03
B. \$1.29
C. \$1.48
D. \$1.51
8. What is the total cost of the order?
- A. \$39.48
B. \$39.00
C. \$7.80
D. \$7.08

Prize Pig



One day, Sally, James, and their parents returned to their farm to find that their prize pig was missing. The gate was open, and he was not in his pen. The following questions are about the children and their pig.

Use the following information to answer question 9.

James and Sally's father asked some neighbours to help search for the prize pig. The following chart lists the number of people that were searching each hour of the search.

Hour of search	1	2	3	4	5
Number of people	2	5	11	23	

9. If the pattern above continues, how many people would be searching during hour 5?
- A. 32 people
 - B. 35 people
 - C. 41 people
 - D. 47 people

Use the following information to answer question 10.

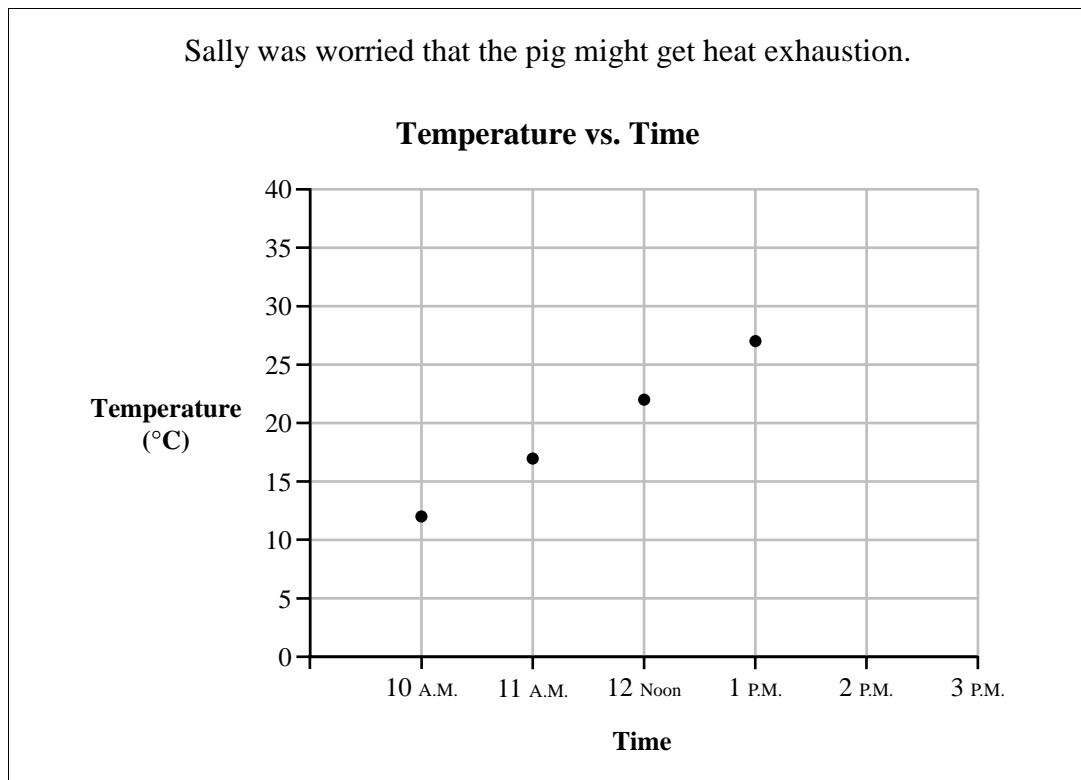
Sally always whistled to the pig when she cleaned its pen, and it would “oink.” While she searched for the pig, Sally whistled, hoping that she would hear the pig oink in reply. She whistled this repeating tune.



10. The next notes in the sequence above will be

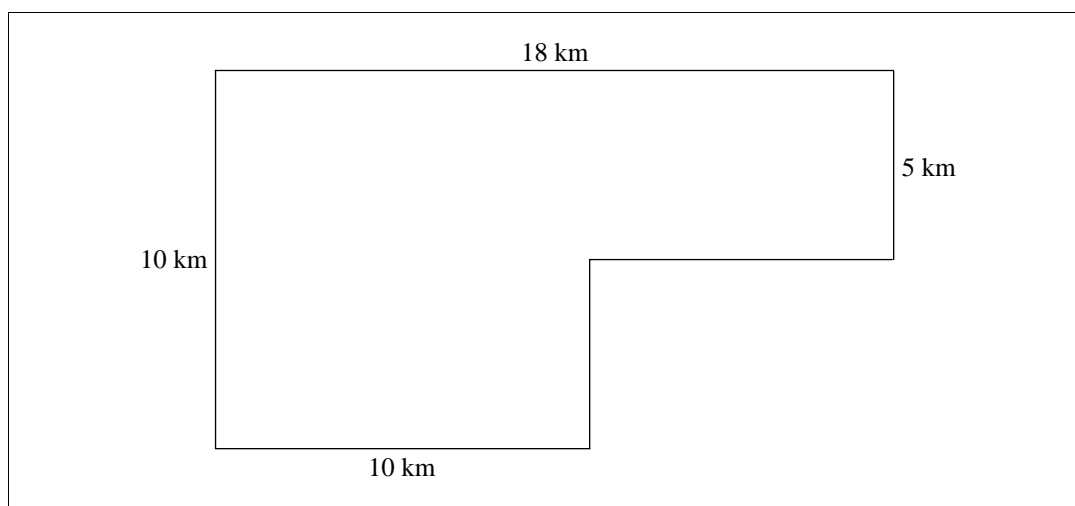


Use the following graph to answer question 11.



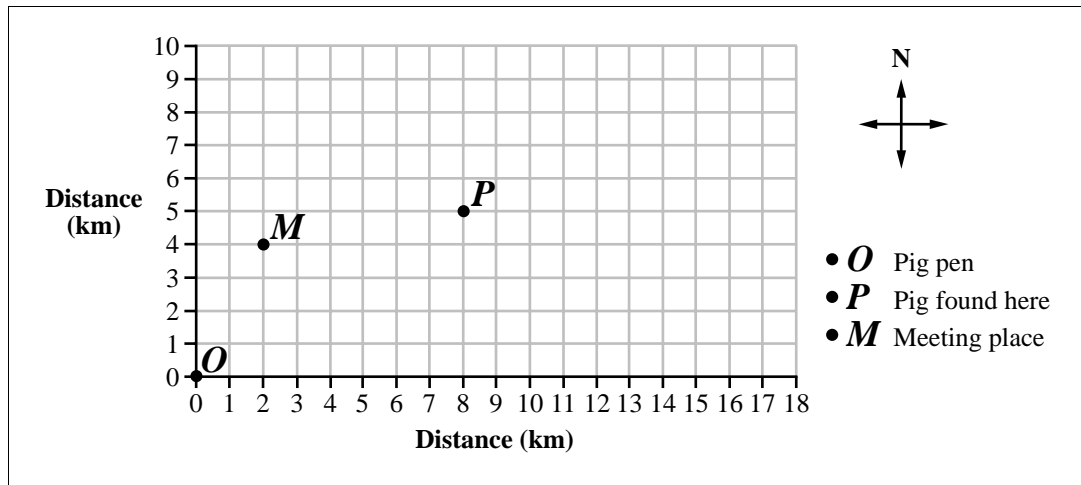
11. Sally thought that the pig should be in the shade if the temperature reached 32°C . If the temperature continues to rise at the rate shown above, at what time will the temperature reach 32°C ?
- A. 1:00 P.M.
 - B. 1:30 P.M.
 - C. 2:00 P.M.
 - D. 2:30 P.M.

Use the following perimeter diagram to answer question 12.



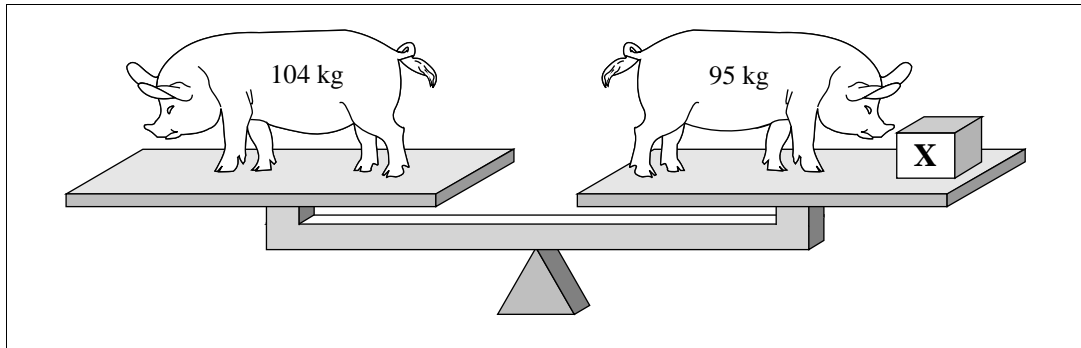
12. Sally and her dad drove around the fields of some neighbouring farms to see if they could find the pig. The diagram above shows the path they drove. In total, they drove
- A. 55 km
 - B. 56 km
 - C. 140 km
 - D. 180 km

Use the following graph to answer questions 13 and 14.



13. One of the neighbours found the pig! Which of the following ordered pairs represents the place where the pig was found?
- A. (8, 5)
B. (4, 2)
C. (2, 4)
D. (5, 8)
14. The neighbour met Sally and her dad at the point labelled *M* on the graph. They were happy and relieved to see the pig! From the point labelled *P*, the neighbour who found the pig had travelled
- A. 6 km W and 1 km S
B. 6 km E and 1 km N
C. 6 km E and 1 km S
D. 6 km W and 1 km N

Use the following information to answer question 15.



15. The pig had a mass of 104 kg before it disappeared. The pig had a mass of 95 kg when it was returned to the farm. In the diagram above, **X** represents the mass that the pig lost during its disappearance. What is the value of **X**?

A. 199 kg
B. 191 kg
C. 19 kg
D. 9 kg

16. James and Sally's father buys materials to repair the pigpen. The supplies cost him a total of \$217.87, which he spent at three stores. He spent \$63.74 at one store and \$93.38 at another store. Approximately how much money did he spend at the third store?

A. \$40.00
B. \$60.00
C. \$100.00
D. \$150.00

Use the following chart to answer question 17.

The following chart shows the mass of food scraps and how much water James and Sally give the pig each day.

Feeding Times Each Day	Food Scraps	Water
7 A.M.	1 kg	2 L
11 A.M.	0.5 kg	1 L
4 P.M.	0.5 kg	2 L

17. The ratio of total food scraps to total water each day is

- A. 2:5
- B. 1:4
- C. 5:2
- D. 1:2

Use the following stem-and-leaf plot to answer question 18.

Range of Market Prices for Hogs (\$/kg)	
\$1.9	3 3 4 5
\$1.8	0 1 2 2 3 4 7
\$1.7	3 5 6 6 7 7 7 8 9
\$1.6	2 4 7 7 8 9
\$1.5	8 9 9

18. The difference between the highest market price for hogs and the lowest market price for hogs is

- A. \$3.53
- B. \$3.51
- C. \$0.37
- D. \$0.35

- 19.** The family sells the prize pig when it once again has a mass of 104 kg. How much money will they receive if hogs are selling for \$1.79/kg?
- A.** \$58.10
 - B.** \$105.79
 - C.** \$179.00
 - D.** \$186.16

Birthday Party

Peter and Lisa Hoffman are twins. Their parents are holding a birthday party for their twelfth birthday.



20. The twins invite 10 guests to their party, and they estimate that each person will eat 75 g of potato chips. If a box of potato chips holds 200 g, what is the fewest number of boxes that they will need to buy for all 12 people?
- A. 4 boxes
 - B. 5 boxes
 - C. 6 boxes
 - D. 12 boxes

Use the following information to answer question 21.

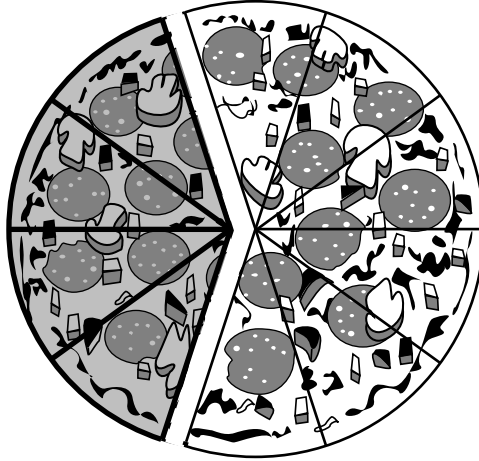
The twins are making juice for the party. It takes 1 can of concentrate and 3 cans of water to make 1 jug of juice.

Making Juice		
Cans of Concentrate	Cans of Water	Jugs of Juice
1	3	1
2	6	2
•	•	•
•	•	•
•	•	•
•	•	•

21. If the twins use 6 cans of concentrate, how many cans of water will they need and how many jugs of juice will they make?
- A. 6 cans of water and 18 jugs of juice
 - B. 7 cans of water and 21 jugs of juice
 - C. 18 cans of water and 6 jugs of juice
 - D. 21 cans of water and 7 jugs of juice

Use the following information to answer question 22.

Mrs. Hoffman orders pizzas for the party. Each pizza is cut into 10 pieces. The portion shaded on the diagram below shows the number of pieces that Mrs. Hoffman estimates that each person would eat on average.



22. What fraction of a pizza did Mrs. Hoffman estimate that each person would eat?

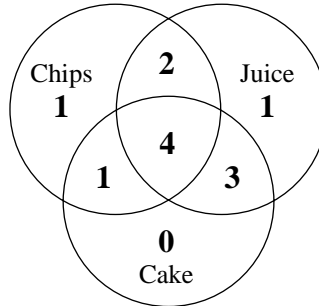
- A. $\frac{1}{4}$
 - B. $\frac{1}{5}$
 - C. $\frac{2}{5}$
 - D. $\frac{1}{10}$
-

23. Lisa eats $\frac{3}{5}$ of a pizza. This is equivalent to

- A. 3%
- B. 6%
- C. 30%
- D. 60%

Use the following diagram to answer question 24.

The Venn diagram below shows the number of servings of chips, juice, and cake that Mrs. Hoffman gave to the children.



24. The Venn diagram above shows that the number of children who took juice was
- A. 12
 - B. 10
 - C. 9
 - D. 1
-

Use the following information to answer question 25.

Jose, Andrew, Mary, and Natalie combined their money to buy the twins a present.

- Jose contributed \$11.50.
- Andrew contributed $\frac{1}{2}$ as much as Jose.
- Mary contributed \$4.50 more than Andrew.
- Natalie contributed \$0.75 less than Jose.

25. How much money did they have altogether to spend on the present?
- A. \$36.75
 - B. \$37.25
 - C. \$38.25
 - D. \$38.75

26. Mr. Hoffman put money in 12 plastic eggs and placed them in a bag. One of the eggs contains a \$2 coin. Each child is allowed to choose one egg. If Ivan chooses first, then the probability that he will choose the plastic egg with the \$2 coin in it is
- A. 1 out of 2
 - B. 1 out of 10
 - C. 1 out of 11
 - D. 1 out of 12

Use the following information to answer question 27.

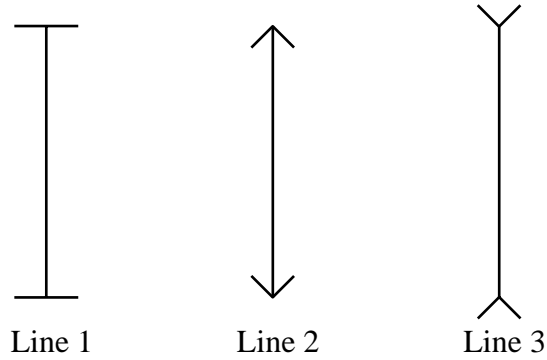
The amount of money that four children found in their eggs totalled \$4.65. The chart below shows how much money each child found.

Name	1¢	5¢	10¢	25¢	\$1
Philip	?	?	?	?	?
Susan	14	4	1	3	0
Jacob	21	0	2	1	0
Beth	5	0	3	0	1

27. How much money did Philip find in his plastic egg?
- A. \$1.45
 - B. \$1.75
 - C. \$2.80
 - D. \$3.20

Use the following information to answer question 28.

Peter and Lisa opened their presents. One of Lisa's presents was a book of optical illusions. The following optical illusion was shown.

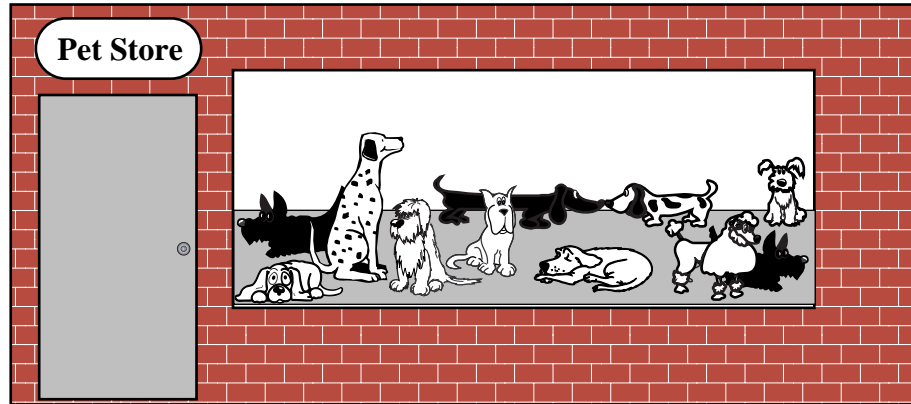


28. Lisa recognized that
- A. line 3 is the longest
 - B. line 1 is longer than line 2
 - C. line 2 is shorter than line 3
 - D. lines 1, 2, and 3 are the same length

Buying a Dog

Zach and Kristen saved their allowance to buy a dog. Their parents take them to a pet store to buy the dog. The next eight questions are about Zach, Kristen, and their dog.

Use the following information to answer question 29.

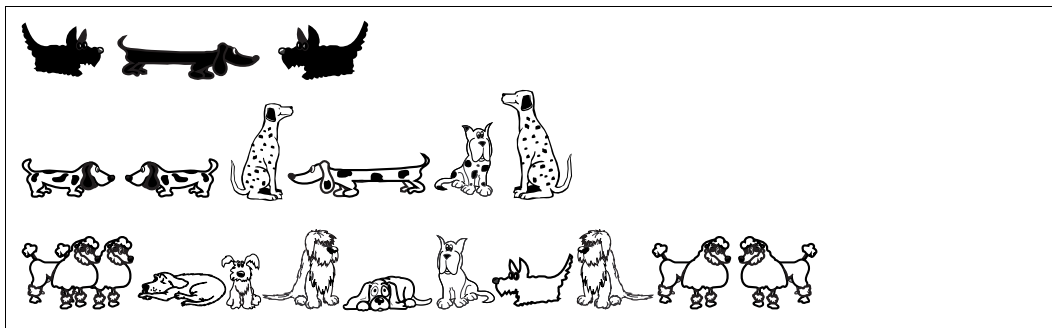


In the pet store window, there are 3 all-black, 6 all-white, and 2 spotted dogs.

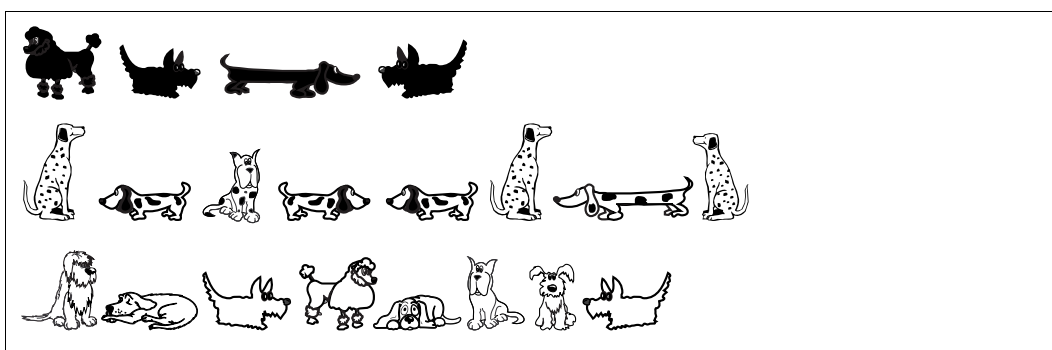
29. The ratio of all-black dogs to all-white dogs, in simplest form, is
- A. 1:2
 - B. 1:3
 - C. 3:8
 - D. 3:11

30. There are 20 dogs. Which of the following pictures shows that 30% of the dogs are all-black?

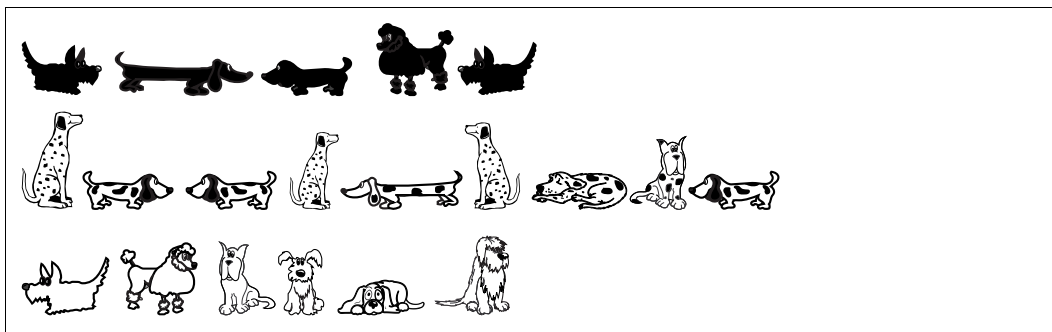
A.



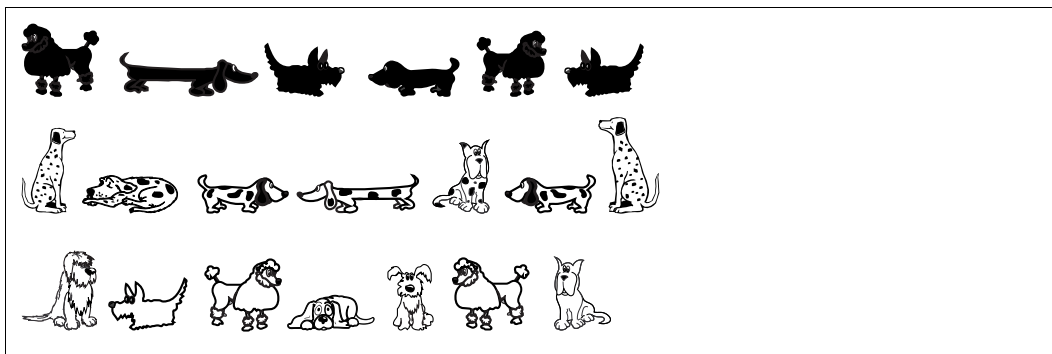
B.



C.

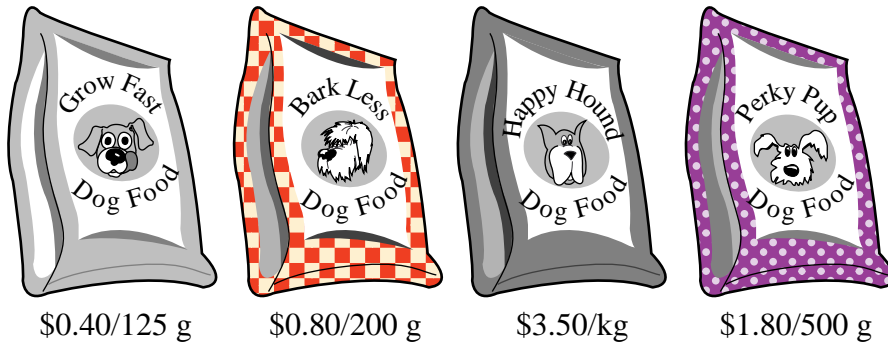


D.



Use the following information to answer question 31.

The pet store sells several brands of dog food.

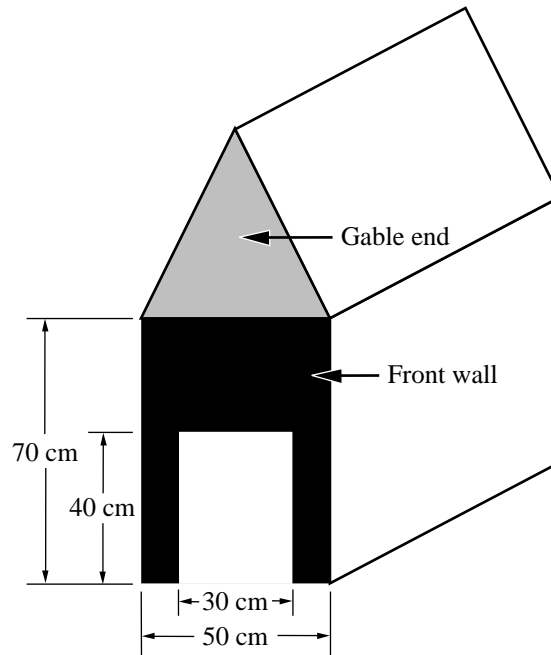


31. Which of the brands labelled above is the **most** expensive?

- A. Grow Fast Dog Food
- B. Bark Less Dog Food
- C. Happy Hound Dog Food
- D. Perky Pup Dog Food

Use the following diagram to answer questions 32 and 33.

Kristen draws a plan for building Max a doghouse. She colours the front wall black and the gable end grey.



32. If she built this doghouse, the area of the front wall that is black would be
- A. $1\,200\text{ cm}^2$
 - B. $2\,100\text{ cm}^2$
 - C. $2\,300\text{ cm}^2$
 - D. $3\,500\text{ cm}^2$
33. On the plan, the gable end of the doghouse is in the shape of a triangle. The three angles of the triangle measure 54° , 63° , and 63° . What type of triangle is this?
- A. Right triangle
 - B. Isosceles triangle
 - C. Scalene triangle
 - D. Equilateral triangle

Use the following diagram to answer question 34.

Kristen buys Max, their new dog, a box of “Bow Wow” treats. They come in a container in the shape of a pentagonal prism.



34. How many vertices does the container have?

- A.** 12 vertices
- B.** 10 vertices
- C.** 6 vertices
- D.** 5 vertices

35. Max's dog tag has 4 digits. The sum of the 4 digits is 15. The number in the thousands position is 3 times the number in the tens position. The number in the hundreds position is 1 more than the number in the ones position. What is the number on the dog tag?
- A. 1 3 2 9
B. 6 3 2 4
C. 7 2 5 1
D. 9 2 3 1

Use the following information to answer question 36.

Some people say that in one year a dog ages the same amount as a person ages in seven years. Zach inferred that 1 "dog year" is equal to 7 "human years." He made this chart.

Zach's Age Compared with Max's Age

Zach's age	Max's age in "Human Years"
11	Max is born
12	7
13	14
14	21

36. How old will Max be in human years when Zach is 17?
- A. 17
B. 35
C. 42
D. 49

As part of a Canadian travel program, an Alberta Travel Club is hosting a group from Ontario.

This graphic has been removed because copyright clearance was not granted.

The next 14 questions are about the group's trip to Alberta and some of their activities.

Use the following information to answer question 37.

Plane Ticket Prices from Toronto to Edmonton	
	Price per person
Adults	\$1 675.00
Children	\$920.00

37. The total cost of the plane tickets for the group from Ontario is \$30 550.00. If there are 15 children, how many adults are in the group?
- A. 10
B. 15
C. 25
D. 30

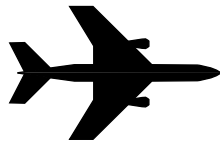
Use the following information to answer question 38.

After the group boards, the plane taxis toward the runway and makes a turn.



38. What does the plane look like after a 90° counterclockwise turn?

A.



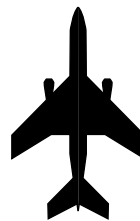
B.



C.



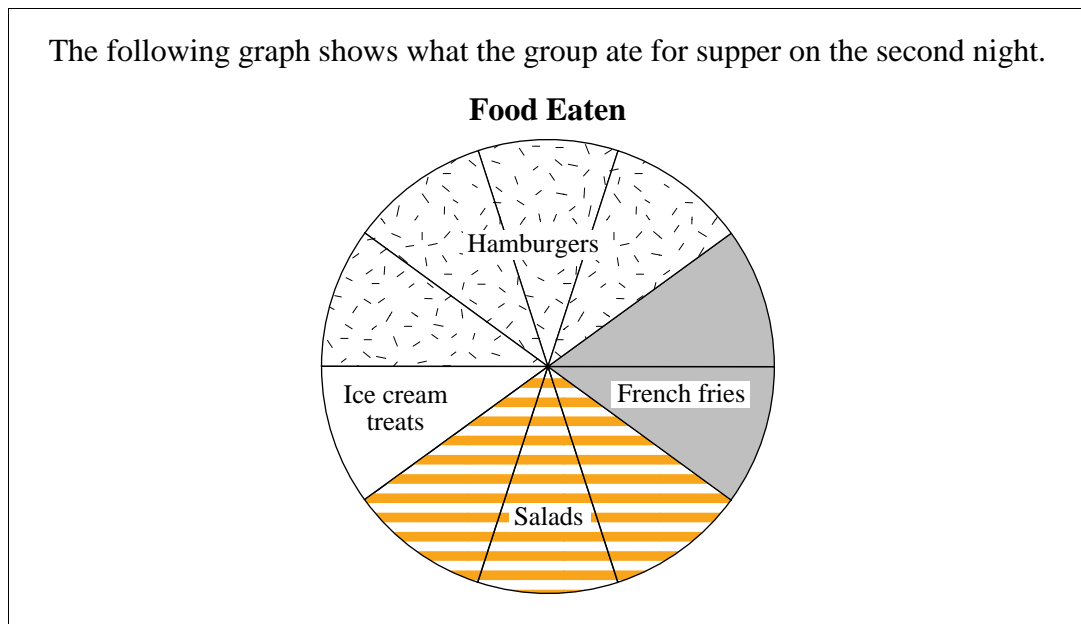
D.



39. All of the 60 hosts from Alberta and 15 of the group from Ontario visit the Provincial Museum. The ticket purchased by the first person in the group is number 149. People with ticket numbers that are multiples of 4 are given a coupon for a free pop. How many people receive a coupon for a free pop?

- A. 15
- B. 18
- C. 60
- D. 64

Use the following information to answer question 40.



40. Hamburgers and French fries represent what percentage of the total food that the group ate?
- A. 20%
- B. 40%
- C. 50%
- D. 60%
-
41. The group attends a carnival at which 25% of the people are given balloons. What fraction of the people are given balloons?
- A. $\frac{1}{25}$
- B. $\frac{25}{10}$
- C. $\frac{1}{4}$
- D. $\frac{25}{4}$

Use the following information to answer question 42.

At a souvenir booth, a variety of items are sold.

Ball cap	\$ 7.98
T-shirt	\$16.82
Pin	\$ 1.25
Balloon	\$ 0.50
Banner	\$ 8.76

42. If Alison buys 3 items that cost a total of \$26.05, what items does she buy?
- A. Three ball caps
 - B. Two ball caps and one T-shirt
 - C. One ball cap, one T-shirt, and one pin
 - D. Three banners
-
43. At a dart-throw game, Darcy takes four throws. Each of his scores is a multiple of 3. Which of the following scores are Darcy's?
- A. 3, 21, 26, 30
 - B. 9, 13, 19, 27
 - C. 12, 24, 15, 33
 - D. 18, 22, 36, 16
44. Sam sees a large jar full of jelly beans in a booth at the carnival. She guesses that the jar contains four thousand seven hundred ninety-six jelly beans. What digit is in the tens place of this number?
- A. 4
 - B. 6
 - C. 7
 - D. 9

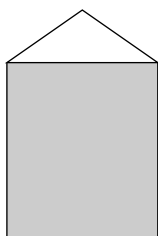
Use the following information to answer question 45.

In order to win a Ring Toss game, a person has to get three rings over one of these objects:

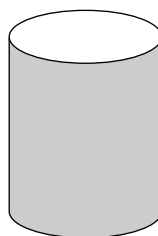
triangular prism
hexagonal prism
triangular pyramid
cylinder
octagonal prism

45. Which of the following objects is **not** listed above?

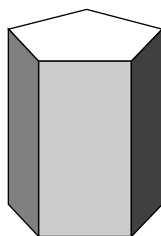
A.



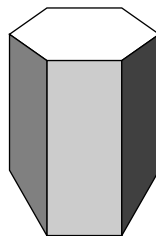
B.



C.



D.



Use the following information to answer question 46.

Carrie plays a game called “Number Find.” The object of the game is to determine the missing number in a set of numbers. Carrie is given the following set of numbers.

4	16		256	1 024
---	----	--	-----	-------

46. What is the missing number?

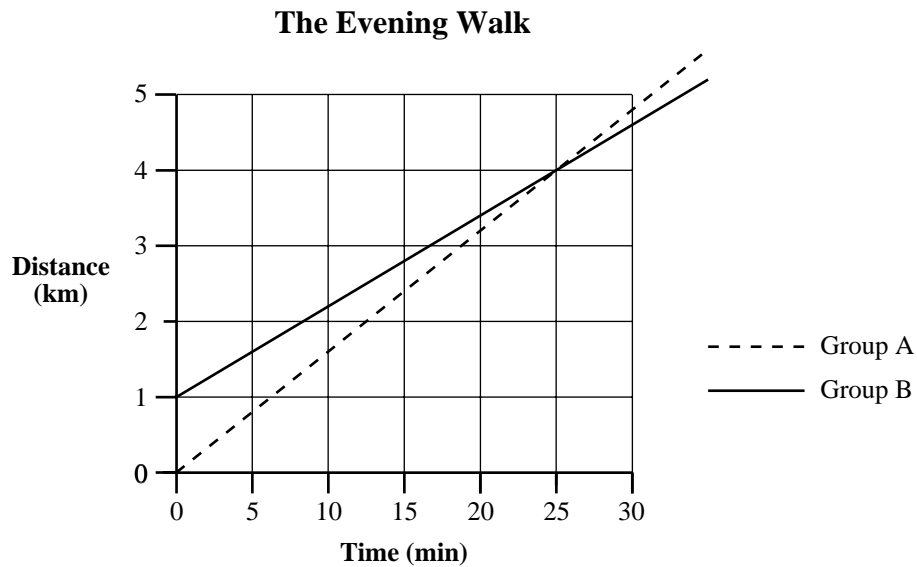
- A.** 20
 - B.** 64
 - C.** 240
 - D.** 256
-

47. The roller coaster can hold 16 people at one time. What is the greatest number of people that can ride the roller coaster in $1\frac{1}{2}$ h if each ride takes a total of 3 min?

- A.** 30 people
- B.** 90 people
- C.** 270 people
- D.** 480 people

Use the following information to answer question 48.

One evening, two groups of people walk on a path in the river valley. When Group A starts, Group B is 1 km ahead. The following graph shows the distance and time travelled by the groups after Group A starts walking.



48. How many minutes does it take Group A to catch up to Group B?

- A. 20 min
- B. 23 min
- C. 25 min
- D. 30 min

Use the following information to answer question 49.

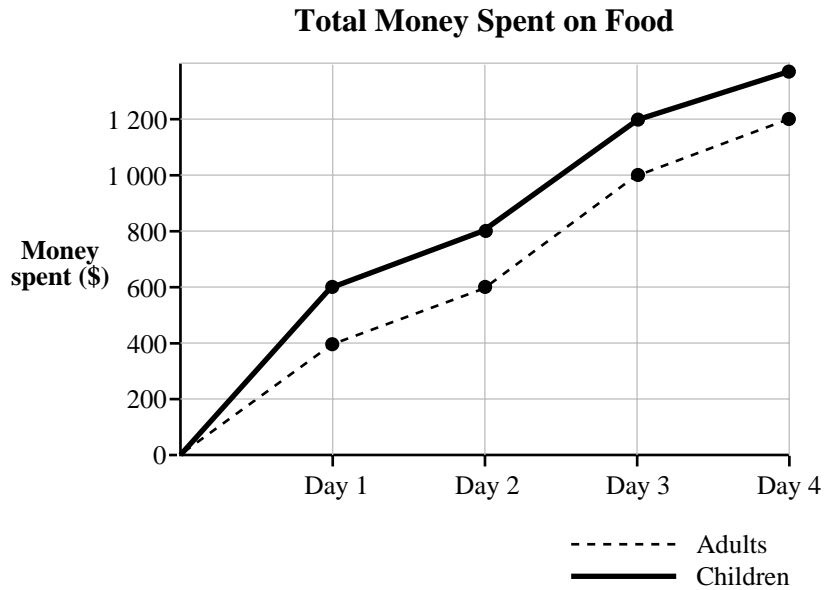
During the last evening of the trip, 10 people are flipping coins. Each person flips one coin 10 times.

This graphic has been removed because copyright clearance was not granted.

49. What is the **most probable** number of times that the coin will land “heads up”?
- A. 10 times
 - B. 30 times
 - C. 50 times
 - D. 70 times

Use the following information to answer question 50.

Melissa makes a graph showing the total amount of money spent on food for four days by the group from Ontario.



50. What is the difference in the amount of money spent on day 1 by the adults and the amount of money spent on day 1 by the children?
- A. \$1 000
 - B. \$600
 - C. \$400
 - D. \$200