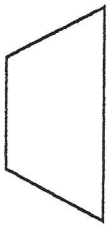
# "M-ath"letes Challenge Championship 2010

TEAM Name_____

Second Half Test

May 14, 2010

1 What is the total number of lines of symmetry that can be drawn on the trapezoid below?



**A** 4

**B** 3

**C** 2

**D** 1

2 Sara attended a dog show from 8:30 A.M. to 3:45 P.M. How long was Sara at the dog show?

**A** 4 hours 15 minutes

**B** 5 hours 15 minutes

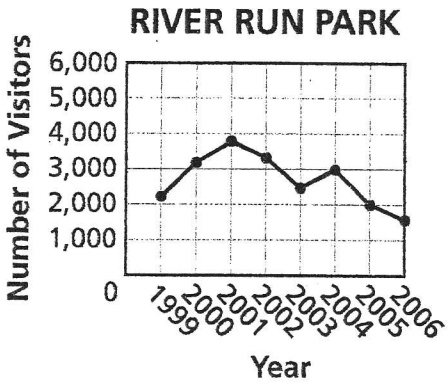
**C** 6 hours 15 minutes

**D** 7 hours 15 minutes

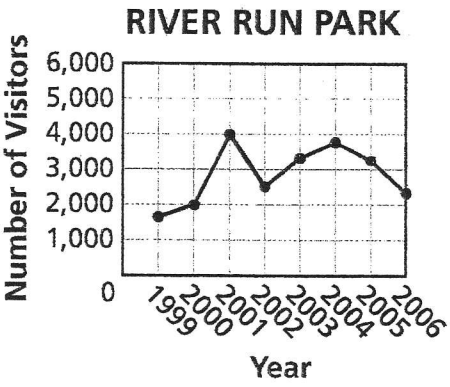
**3** The data below describes the number of visitors at River Run Park.

- After 2001, the number of visitors decreased each year except for 2004.
- In 2004, the **greatest** number of visitors was recorded.

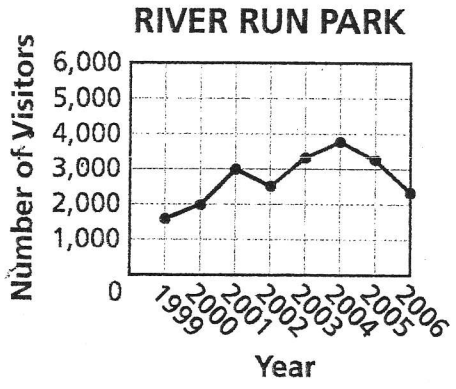
Which line graph represents this data?



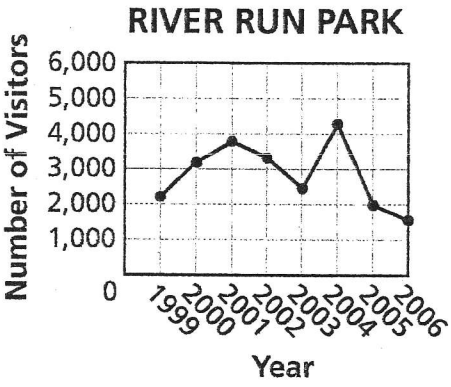

A




C



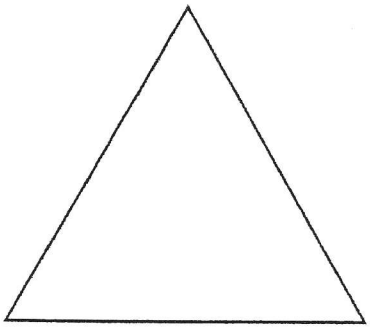

B



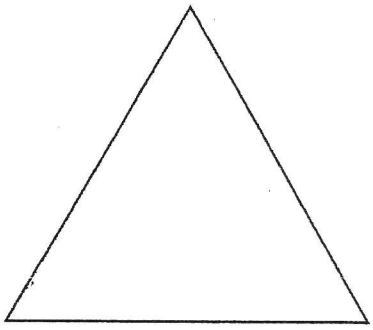

D

4 Use your ruler to help you solve this problem.

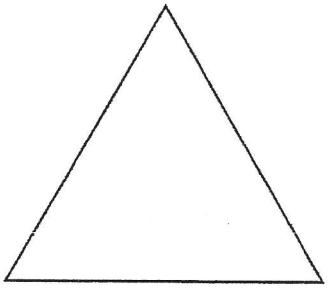
Fredo drew the equilateral triangle shown below.



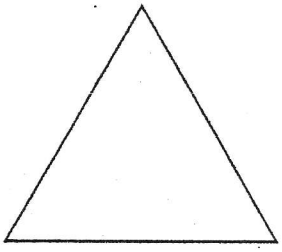
Which equilateral triangle is congruent to Fredo's triangle?



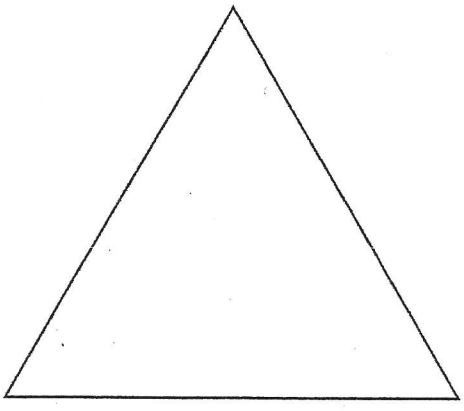
A



C



B



D

**5** What is the value of the expression $4 + 16 \div 4 - 3$?

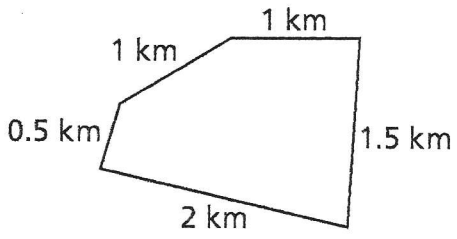
**A** 2

**B** 5

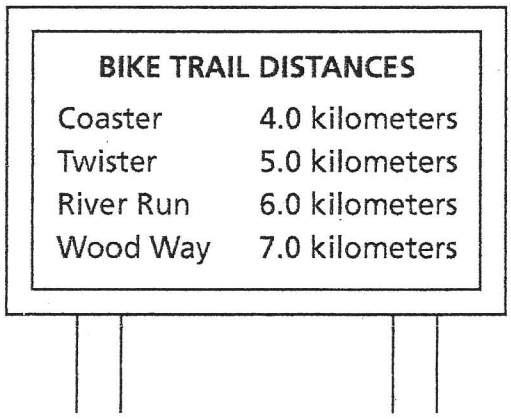
**C** 11

**D** 20

**6** There are four bike trails in Garland Park. The diagram below shows one of the bike trails. The sign shows the distances of all of the bike trails.




[not drawn to scale]




Which bike trail does the diagram show?

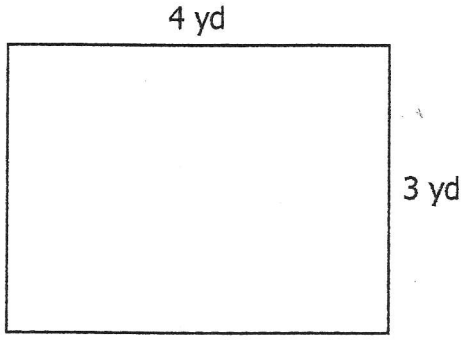
**A** Coaster

**B** Twister

**C** River Run

**D** Wood Way

7




**The area of the field shown in the picture is 12 —**

A F square inches
B G pounds
C H square yards
D J meters

8 There are four hiking trails at Water's Edge Park. The table below shows the distance, in feet, from the beginning of each trail to a waterfall.

**DISTANCE TO WATERFALL**

| Trail | Distance (in feet) |
|---|---|
| 1 | 768 |
| 2 | 804 |
| 3 | 741 |
| 4 | 756 |

Which trail begins 268 yards from the waterfall?

1 yard = 3 feet

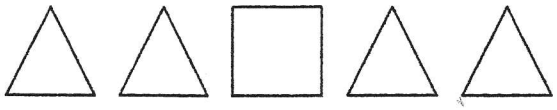
**A** Trail 1

**B** Trail 2

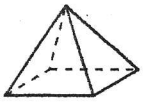
**C** Trail 3

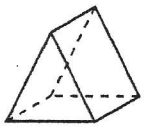
**D** Trail 4

**9** The picture below shows all the faces of a solid.

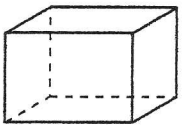


**Which solid could be formed by the faces shown?**

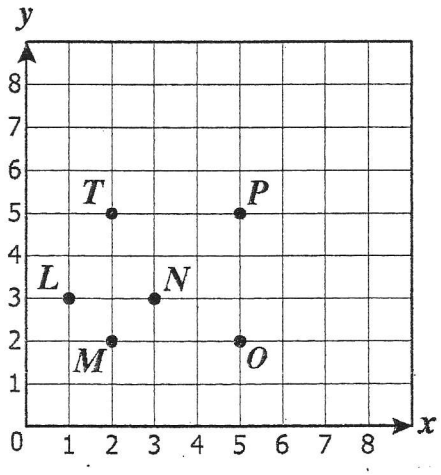
A 

B 

C 

D 

**10** The picture shows six points on a grid.




**Which three points can be connected to form a right angle?**

**A** Points $T$, $L$, and $N$
**B** Points $L$, $P$, and $T$
**C** Points $N$, $O$, and $P$
**D** Points $M$, $O$, and $P$

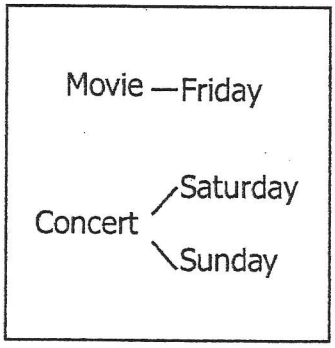
11 **Joe wants to do something fun this weekend.**

**Weekend Options**

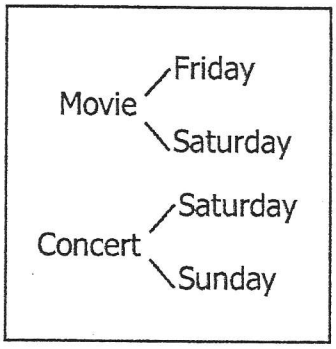
| Event | Day |
|---|---|
| Movie | Friday |
| Concert | Saturday |
| | Sunday |

**Which diagram shows all possible combinations Joe has if he picks 1 event and 1 day from the chart?**

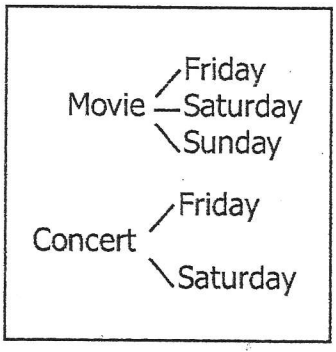
**A**



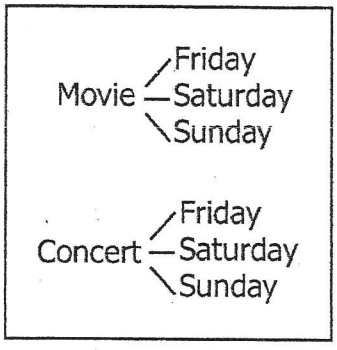

**B**




**C**

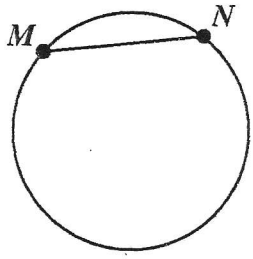



**D**

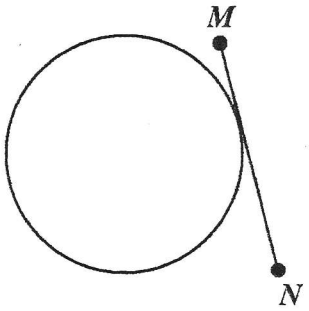


12 Which illustration *best* shows $\overline{MN}$ as the radius of the circle?

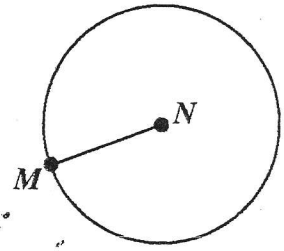
A



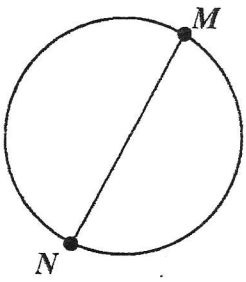

B




C

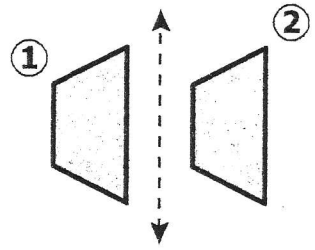



D

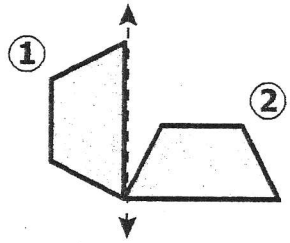


13 In which picture is Figure 2 a reflection (flip) of Figure 1 across the dashed line?

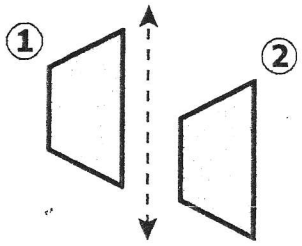
A



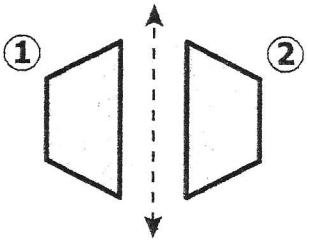

B



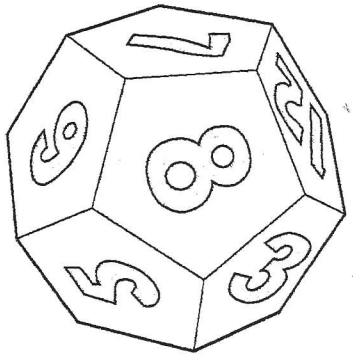

C




D



**14** Celeste has a 12-sided solid with sides numbered 1 through 12.




**What is the probability that she will roll a 4, 5, or 6 on the first roll?**

A F $\frac{3}{12}$

B G $\frac{4}{12}$

C H $\frac{5}{12}$

D J $\frac{6}{12}$

**15** Mr. Copeland made a chart to display the number of each kind of prize he had in his prize box.

**Prizes in the Prize Box**

| Kind of Prizes | Number |
|---|---|
| Balls | 10 |
| Puzzles | 7 |
| Lollipops | 18 |
| Poppers | 15 |
| Squirt rings | 7 |
| Stickers | 21 |
| Cars | 6 |

**What is the mode of the numbers in the chart?**

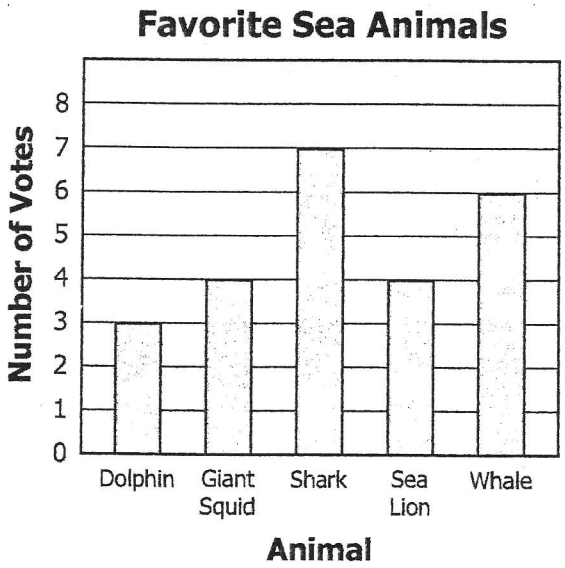
A F 7

B G 10

C H 12

D J 15

16 **Students in Mr. Malone's class voted for their one favorite sea animal. The results are shown below.**




**The greatest difference in the number of votes received was between the —**

**A** Giant Squid and Shark
**B** Sea Lion and Whale
**C** Giant Squid and Whale
**D** Dolphin and Shark

17 **Pieces of paper numbered 1 through 31 are in a bag. Sal drew a piece of paper from the bag without looking. Which question could be answered using probability?**

A F How many odd numbers are written on the pieces of paper?
B G Is the number Sal drew from the bag likely to be less than 10 ?
C H How many pieces of paper are in the bag before any are drawn out?
D J After Sal drew a piece of paper from the bag, how many pieces were left?

18 **The chart shows the number of each color of counting chip Mr. Kellas placed in an empty box. All the chips were the same size and shape.**

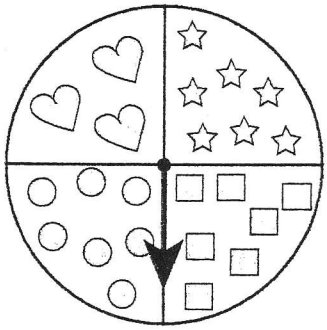
**Counting Chips**

| Color | Number in Box |
|---|---|
| Red | 6 |
| Yellow | 1 |
| Green | 2 |
| Purple | 6 |
| White | 1 |

**Ross is going to take 4 counting chips out of the box without looking. Which combination of counting chips could Ross take from the box?**

**A** 2 purple, 2 white
**B** 2 red, 2 yellow
**C** 1 white, 3 purple
**D** 3 green, 1 yellow

**19** **Peggy spins the arrow on the spinner shown.**



**What is the probability that the arrow will point to the section containing hearts on the first try?**

A **F** 1 out of 3
B **G** 1 out of 4
C **H** 3 out of 4
D **J** 3 out of 24

**20** **Which of the following can be solved using the open sentence $s - 6 = ?$**

**A** Pablo has 6 more vacation days than Sandra. If $s$ represents the number of vacation days Sandra has, how many vacation days does Pablo have?

**B** Pablo has 6 times more vacation days than Sandra. If $s$ represents the number of vacation days Sandra has, how many vacation days does Pablo have?

**C** Pablo has 6 fewer vacation days than Sandra. If $s$ represents the number of vacation days Sandra has, how many vacation days does Pablo have?

**D** Sandra has 6 times more vacation days than Pablo. If $s$ represents the number of vacation days Sandra has, how many vacation days does Pablo have?

# Mathematics Reference Sheet
# Grade 5

***Use the information below, as needed, to answer questions on the Mathematics test.***

| **Square** | **Rectangle** | **Triangle** |
|---|---|---|
| Area = $s \times s$<br>Perimeter = $4 \times s$ | Area = $l \times w$<br>Perimeter = $(2 \times l) + (2 \times w)$ | Perimeter = $a + b + c$ |

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet

1 pound (lb) = 16 ounces (oz)

1 cup = 8 ounces (oz)
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 kilogram = 1000 grams
1 meter = 100 centimeters
1 centimeter = 10 millimeters
1 kilometer = 1000 meters
1 liter = 1000 milliliters

**M-athletes Challenge Championship - 2nd Half**

Name: KEY

1. D
2. D
3. D
4. A
5. B
6. C
7. C
8. B
9. A
10. D
11. D
12. C
13. D
14. A
15. A
16. D
17. B
18. C
19. B
20. C