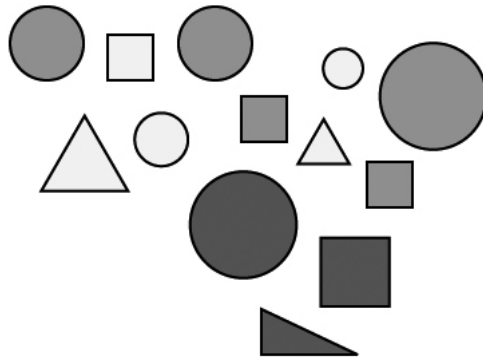


# Level A - Form 1 - Applied Mathematics: Number and Number Operations

## Sample Question



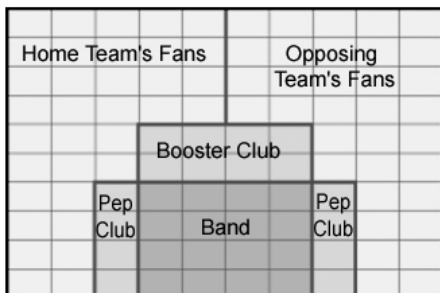
What is the ratio of circles to squares?

- A 6 to 13
- B 3 to 2
- C 6 to 4
- D 6 to 7

# Level A - Form 1 - Applied Mathematics: Number and Number Operations

The diagram shows where various groups are seated at a football stadium. The table shows the stadium's income and expenses last year. Study the diagram and table. Then do Numbers 1 through 4.

## STADIUM SEATING



## STADIUM FINANCES

### Yearly Income and Expenses

Ticket Sales: \$1,700,000

Tickets at \$8.00 each

Snack Bar Sales:

\$80,000.00 gross income

Maintenance: \$89,105.00

Utilities: \$9,347.25

Security: \$48,000.00

- What percent of the bleachers are reserved for the booster club?
  - 0.08%
  - 8%
  - 80%
  - 0.8%
- How is the amount of ticket sales written in scientific notation?
  - $1.7 \times 10^6$
  - $17 \times 10^5$
  - $1.7 \times 10^7$
  - $17 \times 10^6$
- Beverage sales at the snack bar totaled \$36,000. What percent of the total snack bar sales were beverage sales?
  - 36%
  - 45%
  - 28.8%
  - 22.2%
- How many tickets were sold?
  - 2,125
  - 21,250
  - 212,500
  - 2,125,000

5. What is 0.000062 in scientific notation?

- A  $6.2 \times 10^5$
- B  $6.2 \times 10^{-4}$
- C  $6.2 \times 10^{-5}$
- D  $6.2 \times 10^4$

6. By some estimates, the population of the world in the year 2025 will be 7,824,000,000. What is this number written in scientific notation?

- F  $78.24 \times 10^8$
- G  $7.824 \times 10^9$
- H  $7.824 \times 10^8$
- J  $7.824 \times 10^9$

The advertisement shows sale prices for electronic equipment. Study the ad. Then do Numbers 7 through 10.

**PRICE WAR!**

DVD Recorder  
Sale Price: **\$450**

Cellular Phone  
with free activation  
**\$99**

**WE BEAT ANY PRICE!**

54" Projection TV  
**\$1,500**

Digital Camcorder  
was \$1,200 **NOW \$720**

**ELECTRONICS  
by FRED**  
63 East West Highway  
(321) 555-6789

Computer, Printer,  
and 15" Monitor  
was \$2,499 **NOW \$1,499**

Financing Available (10% down, 15% Annual Interest)

7. The DVD recorder is on sale for 25% off the regular price. Which of these is the regular price of the DVD recorder?
  - A \$337.50
  - B \$562.50
  - C \$600.00
  - D \$1,800.00
  
8. How much has the camcorder been marked down?
  - F 50%
  - G 60%
  - H 40%
  - J 25%

9. If you financed the 54" projection TV, how much of a down payment would you have to make?
  - A \$100.00
  - B \$15.00
  - C \$150.00
  - D \$10.00
  
10. Juan purchased a computer, printer, and monitor. He made a deposit of 35%. Which of these fractions is equal to 35%?

- F  $\frac{7}{20}$
- G  $\frac{1}{35}$
- H  $\frac{3}{5}$
- J  $\frac{1}{3}$

- 
11. Which number is a factor of all the numbers in the box?

56, 32, 40, 48, 104

- A 3
- B 6
- C 8
- D 5

The sign shows serving and price information for a cat food. Study the information. Then do Numbers 12 through 13.



12. Using the recommended serving size, how many cups would feed a 12-pound cat each day?

F  $1\frac{2}{3}$  cups

G  $1\frac{1}{2}$  cups

H  $1\frac{1}{4}$  cups

J  $1\frac{1}{3}$  cups

13. What would be the cost of a 20-lb bag of Cat Food Plus if every bag of Cat Food Plus is the same price per pound?

A \$28.00

B \$32.00

C \$26.00

D \$35.00

14. Which of these is a multiple of 32?

F 4

G 128

H 8

J 94

15. Jordan uses the calendar page below to arrange his work schedule for July.

July						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Jordan mows his lawn every third day and cleans his swimming pool every seventh day. On the last day of June, Jordan mowed his lawn and cleaned his pool. On which day(s) in July will Jordan both mow his lawn and clean his pool?

A July 20th

B July 21st

C July 14th and July 28th

D July 10th and July 21st

16. To make it into the volleyball finals, a team must win 80% of its games. Which fraction is equivalent to 80%?

F  $\frac{1}{8}$

G  $\frac{4}{5}$

H  $\frac{2}{25}$

J  $\frac{1}{4}$

17. Which number is **not** equivalent to  $\frac{2}{5}$ ?

A 0.4

B 4%

C  $\frac{6}{15}$

D  $\frac{4}{10}$

18. Which number is a factor of 18 and 28?

F 2

G 4

H 6

J 8

19. The grocery store sells 5 apples for \$3.00. What is the cost for 7 apples?

A \$4.15

B \$4.10

C \$4.20

D \$4.50

20. A truck on the interstate travels 32 miles in 30 minutes. At this rate, how far will the truck travel in 4.5 hours?

F 288 miles

G 144 miles

H 720 miles

J 480 miles