

**Benchmark Study Guide Practice Problems-** [Exam ID:0VW7LB] Scan Number:1394  
**Calc Okay**

- 1 **The ratio of boys to girls in the band is 25 to 75. What is the ratio of girls to total students in the band?**

A 75 to 25  
 B 25 to 75  
 C 75 to 100  
 D 25 to 100

- 2 **What is the ratio of stars to total shapes?**



F 3:1  
 G 4:4  
 H 4:3  
 J 4:8

- 3 **There are 21 DVD discs sold for every 33 Blu-ray discs sold at a local media store. Which ratio represents the number of Blu-ray discs sold to the number of DVD discs sold?**

A 18 to 11  
 B 7 to 11  
 C 11:7  
 D 11:18

- 4 **The ratio of oranges to apples served in school lunches is 4 to 5. Which decimal represents the amount of oranges served in school lunches?**

F  $0.\bar{4}$   
 G 1.25  
 H 0.8  
 J  $0.\bar{5}$

- 5 **The school cafeteria orders milk weekly. The ratio of regular milk to chocolate milk is 5:3. Which represents the amount of milk ordered that is regular?**
- A 62.5%
  - B 30%
  - C 37.5%
  - D 80%

- 6 **Which of the following is another way of expressing 2 out of 8 ?**
- F 2.5%
  - G 25
  - H 25%
  - J 2.5

- 7 **A survey was taken at a local high school where students were asked which form of communication with their friends they preferred.**

**Communication Survey**

Type	Number of Students
Online Chat	213
Cellular Phone	287

**Which decimal represents the number of students that prefer communicating with their friends through online chat?**

- A 1.35
  - B 0.426
  - C 0.574
  - D 0.74
- 8 **If there are 25 students in Mrs. Bowen's class, which statement could be true?**
- F girls:boys =  $\frac{15}{7}$
  - G girls:boys =  $\frac{9}{17}$
  - H boys:girls =  $\frac{11}{14}$
  - J boys:girls =  $\frac{13}{10}$

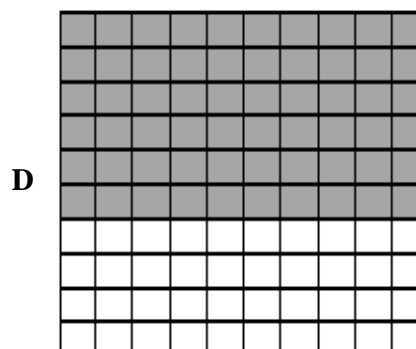
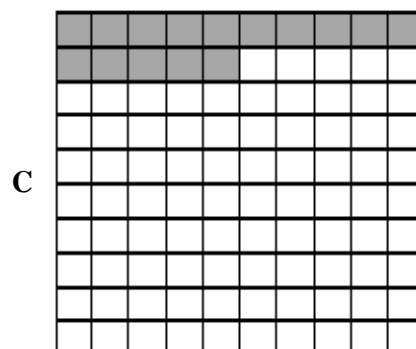
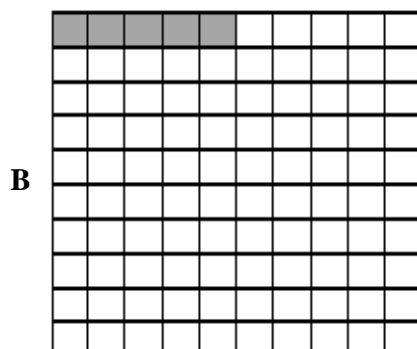
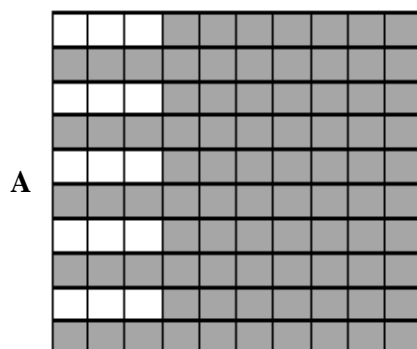
- 9 There are 8 cakes and 15 pies for sale in a store window. What is the ratio of pies to cakes?

- A  $\frac{15}{8}$   
 B  $\frac{8}{15}$   
 C  $\frac{8}{23}$   
 D  $\frac{23}{8}$

- 10 Which of the following scenarios illustrates the ratio  $\frac{10}{19}$ ?

- F The ratio of days Sally went outside for recess to the days that she stayed inside if Sally has been in school for a total of 63 days and 33 days have been spent inside for recess.  
 G The ratio of red marbles to blue marbles from a bag containing 38 blue marbles and 22 red marbles.  
 H The ratio of fiction books to the total amount of books if there are 10 nonfiction books and 9 fiction books on Mary's shelf.  
 J The ratio of the elevation of town A to the elevation of Tessa's house if town A is 1,000 feet above sea level and Tessa's house is at 1,900 feet above sea level.

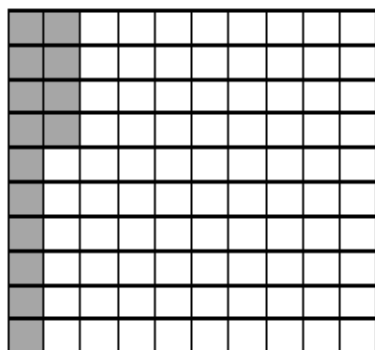
- 11 Which shaded region on the 10-by-10 grid is equivalent to  $\frac{3}{5}$ ?



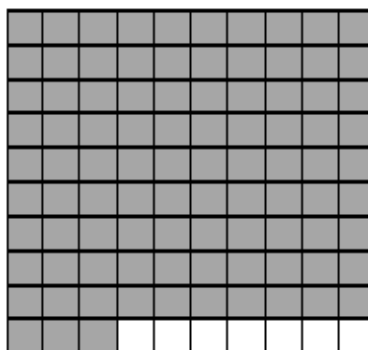
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Which shaded region on the 10-by-10 grid is equivalent to  $\frac{7}{50}$ ?

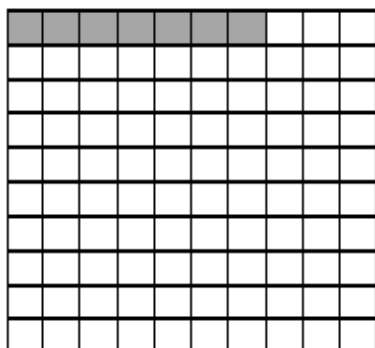
F



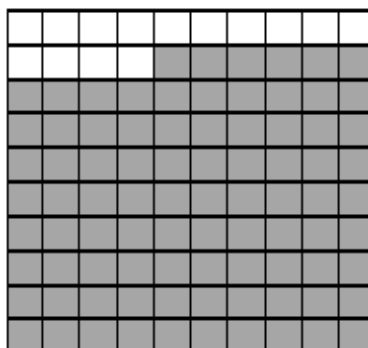
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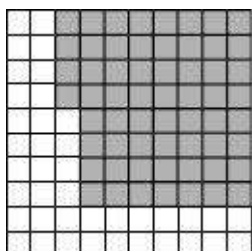
G



J



13 Which represents the part of the 10-by-10 grid that is shaded?



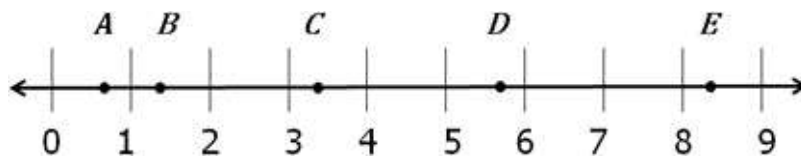
A  $\frac{3}{4}$

B  $\frac{3}{5}$

C  $\frac{7}{10}$

D  $\frac{1}{2}$

- 14 Look at the number line.



Which fraction best represents the position of letter *D*?

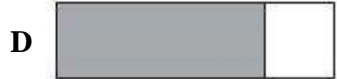
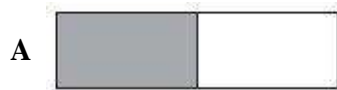
F  $5\frac{1}{4}$

G  $5\frac{1}{8}$

H  $5\frac{7}{8}$

J  $5\frac{5}{8}$

- 15 Which of the following figures most closely shows 25% shaded?



- 16 Multiplying a number by itself creates a perfect square. What perfect square would 9 create?

F 9

G 18

H 1

J 81

- 17 Based on the geometric pattern shown, what is the value of  $8^5$ ?

$$\begin{aligned}8^1 &= 8 \\8^2 &= 64 \\8^3 &= 512 \\8^4 &= 4,096\end{aligned}$$

- A 40
- B 32,768
- C 13
- D 20,480

- 18 Gracie's pattern of increasing perfect squares is shown below.

$$25, 36, \_, 64, 81, 100$$

What number does Gracie need to square to find the missing term?

- F 5
- G 6
- H 8
- J 7

- 19 Based on the pattern shown, what is the value of  $6^6$ ?

$$\begin{aligned}6^1 &= 6 \\6^2 &= 36 \\6^3 &= 216 \\6^4 &= 1,296\end{aligned}$$

- A 2,592
- B 1,308
- C 46,656
- D 36,000

20 Tammy wrote the following values for powers of 10.

$$10^2 = 100$$

$$10^3 = 1,000$$

$$10^4 = 10,000$$

$$10^5 = 100,000$$

Based on the pattern, which is equivalent to 100,000,000 ?

F  $10^7$

G  $10^6$

H  $10^8$

J  $10^9$