

1 ( ; 7 \* ( 1 ( 5 \$ 7 , 2 1

---

# Arithmetic

Sample Questions

# The College Board

H\Y'7c~Y[ Y'6cUFX ]g'U'a ]gg]cb! Xf] Yb 'bcH Zcfl dfc hcf[ Ub]nUh]cb h\UhW\cbbYWg'gh XYbhg

1

— —

13. A machine is currently set to a feed rate of 5.921 inches per minute (IPM). If a machinist changes this setting to 6.088 IPM. By how much did the machinist increase the feed rate?
- A. 0.167 IPM  
B. 1.167 IPM  
C. 1.833 IPM  
D. 1.967 IPM
14.  $0.075, 0.75\frac{3}{4}$
- Which of the following correctly orders the values above from least to greatest?
- A.  $0.75\%, 0.075\frac{3}{4}$   
B.  $0.75\%, \frac{3}{4}, 0.075$   
C.  $\frac{3}{4}, 0.75\%, 0.075$   
D.  $0.075, 0.75\frac{3}{4}$
15. What is the value of  $2.84 \times 3.9$
- A. 3.408  
B. 11.076  
C. 34.08  
D. 110.76
16. What is 0.8637 rounded to the nearest hundredth?
- A. 0.86  
B. 0.863  
C. 0.864  
D. 0.87
17. 60% of what number is equal to 30?
- A. 0.5  
B. 2  
C. 18  
D. 50
18. If  $\frac{4}{3} \div \frac{1}{6} = p$ , then the value of p is between which of the following pairs of numbers?
- A. 3 and 4  
B. 5 and 6  
C. 6 and 7  
D. 7 and 9
19. Which of the following inequalities is true?
- A.  $\frac{3}{4} < \frac{5}{7}$   
B.  $\frac{2}{3} > \frac{5}{6}$   
C.  $\frac{5}{8} > \frac{6}{10}$   
D.  $\frac{4}{5} < \frac{2}{9}$
20. Carole works at a bookstore and a restaurant. In a 28-day period, Carole worked  $\frac{1}{4}$  of the days at the bookstore and did not work  $\frac{1}{14}$  of the days. On the remaining days Carole worked at the restaurant. How many days did Carole work at the restaurant during the 28-day period?
- A. 25  
B. 19  
C. 10  
D. 9



## Rationales

1. Choice D is correct.  $\frac{6}{100} = \frac{3}{50}$
- $\frac{6}{100} = \frac{3}{50}$
- $\frac{3}{50} = \frac{1}{166\frac{2}{3}}$
- $\frac{1}{166\frac{2}{3}} = \frac{6}{100}$
- $\frac{6}{100} = \frac{3}{50}$

2. Choice D is correct.  $\frac{4}{10} + \frac{3}{100} = \frac{40}{100} + \frac{3}{100} = \frac{43}{100} = \frac{3}{8}$
- $\frac{4}{10} + \frac{3}{100} = \frac{40}{100} + \frac{3}{100} = \frac{43}{100} = \frac{3}{8}$

$$\frac{4}{10} + \frac{3}{100}$$

$$\frac{40}{100} + \frac{3}{100}$$

~ 13000

$$(17 \times 3 = 51)$$



19. Choice C is correct.  $\frac{5}{8}$  is greater than  $\frac{6}{10}$

$$XYbca \]bUhc\zHg[g\hYb\gYei \]j UYbh\c \frac{25}{40} > \frac{24}{40} K \Yb\k c\ZUW\cbg\Uj Y$$

W\ta a cb XYbca ]bUhc\zHg[g\hYb\gYei \]j UYbh\c \frac{25}{40} > \frac{24}{40} K \Yb\k c\ZUW\cbg\Uj Y  
7\c\W\5]g]bW\ffY\W\Y\W\gY \frac{3}{4} is not less than  $\frac{5}{7}$ "G\ck b\k f]h\Yb\k \]h\UW\ta a cb

$$XYbca \]bUhc\zHg[g\hYb\gYei \]j UYbh\c \frac{21}{28} < \frac{20}{28} g'bch\lfi Y"7\c\W\6]g]bW\ffY\W\Y\W\gY$$

$\frac{2}{3}$  is not greater than  $\frac{5}{6}$ "G\ck b\k f]h\Yb\k \]h\UW\ta a cb XYbca ]bUhc\zHg[Y

$$W\ta d\Uf\gcb \frac{4}{6} > \frac{5}{6} g'bch\lfi Y"7\c\W\8]g]bW\ffY\W\Y\W\gY \frac{4}{5} is not less than  $\frac{2}{9}$ "$$

$$G\ck b\k f]h\Yb\k \]h\UW\ta a cb XYbca ]bUhc\zHg[Y W\ta d\Uf\gcb \frac{36}{45} < \frac{10}{45} g'bch\lfi Y"$$

20. Choice B is correct.  $7Ufc\Y k cf\_YX \frac{1}{4}$  of the  $28XUng\Uhh\Y Vcc\_ghcfY\zgc\g\Y k cf\_YX$

$$7XUng\Uhh\Y Vcc\_ghcfY(28 \times \frac{1}{4})"G\Y X]X bch\k cf\_cb \frac{1}{14} cZ\h\Y XUng\z\k \]W\Y\gY \]g\Y$$

$$2XUng(28 \times \frac{1}{14})"Gi VhfUW\]b[\h\YgY\]a ci b\h\Zca \]28[ j Yg\h\Y\bi a VYf\cZXUng\g\Y$$

$$k cf\_YX \Uhh\Y fYg\h\]fUbh(28 - 7 - 2 = 19)"7\c\W\5]g]bW\ffY\W\UbX\]a UmVY\h\Y fYgi \h\cZUX\X\]b[$$

$$cZYffcbYci g'mUX\X\]b[\frac{1}{4} and \frac{1}{14} UbX\ bX\]b[\frac{2}{18} U\g\h\Y XUng\]bch\k cf\_YX \Uhh\Y$$

$$fYg\h\]fUbh\]28 - (28 \times \frac{2}{18}) = 25"7\c\W\7]g]bW\ffY\W\UbX\]a UmVY\h\Y fYgi \h\cZUX\X\]b[$$

$$\h\Y XYbca ]bUhc\g\cZ\h\Y ZUW\cbg(14 + 4)UbX\ g\]b[\h\]g\Ug\h\Y\bi a VYf\cZXUng\7Ufc\Y$$

$$X]X bch\k cf\_Uhh\Y fYg\h\]fUbh\]28 - 18 = 10"7\c\W\8]g]bW\ffY\W\Y\W\gY \]h\g\h\Y$$

$$\h\h\]f\]bi a VYf\cZXUng\7Ufc\Y k cf\_YX \Uhh\Y Vcc\_ghcfY\]b\h\Y XUng\g\Y X]X bch\k$$