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FRACTIONS

2011B 1. What is $\frac{2+4+6}{1+3+5} - \frac{1+3+5}{2+4+6}$?

$\textbf{(A)}\ -1 \qquad \textbf{(B)}\ \frac{5}{36} \qquad \textbf{(C)}\ \frac{7}{12} \qquad \textbf{(D)}\ \frac{147}{60} \qquad \textbf{(E)}\ \frac{43}{3}$

2013B 1. What is $\frac{2+4+6}{1+3+5} - \frac{1+3+5}{2+4+6}$?

$\textbf{(A)}\ -1 \qquad \textbf{(B)}\ \frac{5}{36} \qquad \textbf{(C)}\ \frac{7}{12} \qquad \textbf{(D)}\ \frac{49}{20} \qquad \textbf{(E)}\ \frac{43}{3}$

2014A 1. What is $10 \cdot (\frac{1}{2} + \frac{1}{5} + \frac{1}{10})^{-1}$?

$\textbf{(A)}\ 3 \qquad \textbf{(B)}\ 8 \qquad \textbf{(C)}\ \frac{25}{2} \qquad \textbf{(D)}\ \frac{170}{3} \qquad \textbf{(E)}\ 170$

2016B

1. What is the value of

$$\frac{2a^{-1}+\frac{a^{-1}}{2}}{a}$$

when $a=\frac{1}{2}$?

(A) 1 **(B)** 2 **(C)** $\frac{5}{2}$ **(D)** 10 **(E)** 20

2002A

2. For the nonzero numbers a, b, and c, define

$$(a,b,c)=\frac{a}{b}+\frac{b}{c}+\frac{c}{a}.$$

Find $(2,12,9)$.

(A) 4 **(B)** 5 **(C)** 6 **(D)** 7 **(E)** 8

2009B

2. Which of the following is equal to

$$\frac{\frac{1}{3}-\frac{1}{4}}{\frac{1}{2}-\frac{1}{3}}?$$

(A) $\frac{1}{4}$ **(B)** $\frac{1}{3}$ **(C)** $\frac{1}{2}$ **(D)** $\frac{2}{3}$ **(E)** $\frac{3}{4}$

2013A

2. Alice is making a batch of cookies and needs $2\frac{1}{2}$ cups of sugar. Unfortunately, her measuring cup holds only $\frac{1}{4}$ cup of sugar. How many times must she fill that cup to get the correct amount of sugar?

(A) 8 **(B)** 10 **(C)** 12 **(D)** 16 **(E)** 20

2014A

2. Roy's cat eats $\frac{1}{3}$ of a can of cat food every morning and $\frac{1}{4}$ of a can of cat food every evening. Before feeding his cat on Monday morning, Roy opened a box containing 6 cans of cat food. On what day of the week did the cat finish eating all the cat food in the box?

(A) Tuesday **(B)** Wednesday **(C)** Thursday **(D)** Friday

(E) Saturday

2014B

2. What is $\frac{2^3+2^3}{2^{-3}+2^{-3}}$?

(A) 16 (B) 24 (C) 32 (D) 48 (E) 64

2005B 3. A gallon of paint is used to paint a room. One third of the paint is used on the first day. On the second day, one third of the remaining paint is used. What fraction of the original amount of paint is available to use on the third day?

(A) $\frac{1}{10}$ (B) $\frac{1}{9}$ (C) $\frac{1}{3}$ (D) $\frac{4}{9}$ (E) $\frac{5}{9}$

2009A

3. Which of the following is equal to $1+\frac{1}{1+\frac{1}{1+1}}$?

(A) $\frac{5}{4}$ (B) $\frac{3}{2}$ (C) $\frac{5}{3}$ (D) 2 (E) 3

2008A 4. Suppose that $\frac{2}{3}$ of 10 bananas are worth as much as 8 oranges. How many oranges are worth as much as $\frac{1}{2}$ of 5 bananas?

(A) 2 (B) $\frac{5}{2}$ (C) 3 (D) $\frac{7}{2}$ (E) 4

2015A 4. Pablo, Sofia, and Mia got some candy eggs at a party. Pablo had three times as many eggs as Sofia, and Sofia had twice as many eggs as Mia. Pablo decides to give some of his eggs to Sofia and Mia so that all three will have the same number of eggs. What fraction of his eggs should Pablo give to Sofia?

(A) $\frac{1}{12}$ (B) $\frac{1}{6}$ (C) $\frac{1}{4}$ (D) $\frac{1}{3}$ (E) $\frac{1}{2}$

2015B 4. Four siblings ordered an extra large pizza. Alex ate $\frac{1}{5}$, Beth $\frac{1}{3}$, and Cyril $\frac{1}{4}$ of the pizza. Dan got the leftovers. What is the sequence of the siblings in decreasing order of the part of the pizza they consumed?

(A) Alex, Beth, Cyril, Dan

(B) Beth, Cyril, Alex, Dan

(C) Beth, Cyril, Dan, Alex

(D) Beth, Dan, Cyril, Alex

(E) Dan, Beth, Cyril, Alex

2006A 5. Doug and Dave shared a pizza with 8 equally-sized slices. Doug wanted a plain pizza, but Dave wanted anchovies on half of the pizza. The cost of a plain pizza was \$8, and there was an additional cost of \$2 for putting anchovies on one half. Dave ate all the slices of anchovy pizza and one plain slice. Doug ate the remainder. Each then paid for what he had eaten. How many more dollars did Dave pay than Doug?

(A) 1 **(B)** 2 **(C)** 3 **(D)** 4 **(E)** 5

2005B 5. Brianna is using part of the money she earned on her weekend job to buy several equally-priced CDs. She used one fifth of her money to buy one third of the CDs. What fraction of her money will she have left after she buys all the CDs?

(A) $\frac{1}{5}$ **(B)** $\frac{1}{3}$ **(C)** $\frac{2}{5}$ **(D)** $\frac{2}{3}$ **(E)** $\frac{4}{5}$

2008A 5. Which of the following is equal to the product

$$\frac{8}{4}\cdot\frac{12}{8}\cdot\frac{16}{12}\cdot\cdots\cdot\frac{4n+4}{4n}\cdot\cdots\cdot\frac{2008}{2004}?$$

(A) 251 **(B)** 502 **(C)** 1004 **(D)** 2008 **(E)** 4016