

Miguel Christopher

6.3 College MATH

even 2-74

Choose the expression that is equivalent to the given rational #

$$\begin{array}{r} 2 \\ 3 \end{array} = \begin{array}{r} 0.66 \\ 3 \overline{) 20} \\ \underline{18} \\ 20 \\ \underline{18} \\ 2 \end{array}$$

B $0.\overline{6}$

$$\begin{array}{r} 1 \\ 4 \end{array} = \begin{array}{r} 0.25 \\ 4 \overline{) 10} \\ \underline{8} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

A 0.25

6) write each fraction in lowest terms

$\frac{21}{28} = \frac{3}{4}$

$\frac{-8}{48} = \frac{2}{12} = \frac{1}{6}$

10) write each fraction in 3 other ways

$\frac{9}{10} = 0.9, 90\%, \frac{90}{100}$

write in 3 other ways

$$\begin{array}{r} -7 \\ 12 \end{array} = \begin{array}{r} 0.58 \\ 12 \overline{) 70} \\ \underline{60} \\ 100 \\ \underline{96} \\ 14 \\ \underline{12} \\ 2 \end{array} \quad \begin{array}{r} 7 \\ 12 \end{array} = \frac{14}{24} \quad \begin{array}{r} 7 \\ 12 \end{array} = \frac{35}{60}$$

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14) write fraction in lowest term

a) $\frac{12}{24} = \frac{1}{2}$

b) $\frac{6}{24} = \frac{1}{4}$

c) $\frac{2}{12} = \frac{1}{6}$

d) $\frac{2}{4} = \frac{1}{2}$

16) $20 \overline{) 80}$
 $\underline{40}$
 40
 $\underline{40}$
 0
400°

$30 \overline{) 120}$
 $\underline{90}$
 30
 $\underline{30}$
 0
120

Same batting average

18)

18) Perform the indicated operation

$\frac{7}{9} + \frac{1}{9} = \frac{8}{9}$

20)

$\frac{1}{15} + \frac{7}{18}$
3 3
5 1 3 2

$\frac{15}{15} + \frac{14}{18}$
15 18 | 2
15 9 | 3
5 3 | 5
1 3 | 3
1 1 2

$\frac{6}{90} + \frac{35}{90} = \frac{41}{90}$

24)

$\frac{13}{20} - \frac{5}{12}$

$\frac{20}{20} - \frac{10}{12}$
20 12 | 2
10 6 | 2
5 3 | 5
1 3 | 3
1 1

$\frac{39}{60} - \frac{25}{60} = \frac{14}{60} = \frac{7}{30}$

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(26) $\frac{19}{13} - \frac{7}{12}$

$$\begin{array}{r|l} 15, 12 & 2 \\ \hline 15, 6 & 3 \\ \hline 5, 2 & 5 \\ \hline 1, 2 & 2 \\ \hline & 1 \end{array}$$

$$\frac{76}{60} - \frac{35}{60} = \frac{41}{60}$$

(28) $\frac{3}{8} \cdot \frac{2}{7} = \frac{6}{56} = \frac{3}{28}$

(30) $-\frac{2}{4} \cdot \frac{3}{9} = \frac{6}{36} =$

$-\frac{1}{6}$

(32) $\frac{15}{16} \div \frac{30}{8} = \frac{15}{16} \times \frac{8}{30} = \frac{120}{480} = \frac{15}{60} = \frac{3}{12} = \frac{1}{4}$

(34) $-\frac{3}{8} \div \frac{5}{4} = -\frac{3}{8} \times \frac{4}{5} = \frac{12}{40} = \frac{3}{10}$

(36) $\frac{2}{5} \div \left(-\frac{4}{5} \cdot \frac{3}{10}\right) = \frac{2}{5} \div \frac{-4 \times 3}{5 \times 10}$

$\frac{2}{5} \div$

$\frac{40}{15}$

$\frac{2}{5} \times \frac{-15}{40}$

$\frac{30}{200} = \frac{3}{20}$

Mixed Numbers

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Convert to fraction then back to mix number

(48) $-4 \frac{1}{6} \div 1 \frac{2}{3}$

$$-\frac{25}{6} \div \frac{5}{3} = -\frac{25}{6} \times \frac{3}{5} = \frac{75}{30} = 2 \frac{15}{30} = 2 \frac{1}{2}$$

(50) $\frac{3}{8} \div \frac{11}{16} = \frac{3}{8} \times \frac{16}{11} = \frac{48}{88} = \frac{24}{44} = \frac{6}{11}$

Simplify each complex fractions

(52) $\frac{\frac{2}{3} + \frac{1}{6}}{\frac{4}{6} + \frac{1}{6}} = \frac{\frac{5}{6}}{\frac{5}{6}} = \frac{5}{6} \div \frac{5}{6} = \frac{5}{6} \times \frac{6}{5} = \frac{30}{30} = 2 \frac{2}{18} = 2 \frac{1}{9}$

(54) $\frac{\frac{3}{16} - \frac{1}{2}}{\frac{5}{16} + \frac{1}{8}} = \frac{\frac{3}{16} - \frac{8}{16}}{\frac{5}{16} + \frac{2}{16}} = \frac{\frac{-5}{16}}{\frac{7}{16}} = \frac{-5}{16} \div \frac{7}{16} = \frac{-5}{16} \times \frac{16}{7} = \frac{-112}{112} = -1$

$3 \frac{22}{30}$

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56

$$\frac{11}{15} + \frac{1}{9}$$

$$\frac{53}{45} + \frac{5}{45} = \frac{38}{45}$$

$$\frac{13}{15} - \frac{2}{3}$$

$$\frac{13}{15} - \frac{10}{15} = \frac{3}{15}$$

$$\frac{38}{45} \div \frac{3}{5}$$

$$\frac{38}{45} \times \frac{5}{3}$$

$$= \frac{190}{135} = 1 \frac{55}{135}$$

58

$$4 + \frac{1}{2} + \frac{1}{3}$$

60

Find rational number between

$$\frac{1}{3} \text{ and } \frac{1}{2}$$

$$\frac{1+1}{3+2} = \frac{2}{5} = 1 \frac{1}{5}$$

62

$$\frac{7}{12} - \frac{2}{8}$$

$$\frac{7+5}{12+8} = \frac{12}{20} = \frac{3}{5}$$

64

$$\frac{-3}{1} - \frac{5}{2}$$

$$\frac{-3+5}{1+2} = \frac{-8}{3} = 2 \frac{2}{3}$$

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66) Find average

$$\begin{array}{r} 96.7 \\ 57.6 \\ \hline 154.3 \end{array}$$

$$\begin{array}{r} 27.15 \\ \hline 2 \overline{) 154.3} \\ \underline{14} \\ 14 \\ \underline{0} \\ 0.3 \\ \underline{2} \\ 10 \end{array}$$

Find Rational
68 number between

$$\frac{10}{11} \text{ and } \frac{13}{14}$$

$$\frac{10+13}{11+14} = \frac{23}{25}$$

70) $\frac{6}{11}$ and $\frac{13}{14}$

$$\frac{6+13}{11+14} = \frac{19}{25}$$

72) $\frac{11}{5}$ and $\frac{12}{11}$

$$\frac{11+12}{5+11} = \frac{23}{16}$$

$$\frac{23}{16}$$

74) $\frac{3}{1}$ and $\frac{4}{1}$

$$\frac{3+4}{1+1} = \frac{7}{2}$$

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