

# Worksheet

04/29/2018

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Problem quickname: 6408

1)

Calculate the result.

Quick:  
6408

$$\begin{aligned} \text{a) } & \frac{7}{24} - \frac{1}{8} - \frac{1}{48} \mid \text{convert to like quantities (lcm): 48} \\ & = \frac{14}{48} - \frac{6}{48} - \frac{1}{48} \mid \text{add numerators} \\ & = \frac{7}{48} \end{aligned}$$

$$\begin{aligned} \text{b) } & \frac{11}{42} - \frac{1}{42} - \frac{1}{7} \mid \text{convert to like quantities (lcm): 42} \\ & = \frac{11}{42} - \frac{1}{42} - \frac{6}{42} \mid \text{add numerators} \\ & = \frac{4}{42} \mid \text{reduce} \\ & = \frac{2}{21} \end{aligned}$$

$$\begin{aligned} \text{c) } & \frac{10}{21} + \frac{5}{42} - \frac{2}{7} \mid \text{convert to like quantities (lcm): 42} \\ & = \frac{20}{42} + \frac{5}{42} - \frac{12}{42} \mid \text{add numerators} \\ & = \frac{13}{42} \end{aligned}$$

$$\begin{aligned} \text{d) } & \frac{19}{48} + \frac{25}{48} - \frac{5}{6} \mid \text{convert to like quantities (lcm): 48} \\ & = \frac{19}{48} + \frac{25}{48} - \frac{40}{48} \mid \text{add numerators} \\ & = \frac{4}{48} \mid \text{reduce} \\ & = \frac{1}{12} \end{aligned}$$

$$\begin{aligned} \text{e) } & \frac{10}{37} - \frac{3}{37} - \frac{5}{37} \mid \text{convert to like quantities (lcm): 37} \\ & = \frac{10}{37} - \frac{3}{37} - \frac{5}{37} \mid \text{add numerators} \\ & = \frac{2}{37} \end{aligned}$$

$$\begin{aligned}
 \text{f) } & \frac{14}{39} - \frac{3}{13} + \frac{25}{39} \mid \text{convert to like quantities (lcm): 39} \\
 & = \frac{14}{39} - \frac{9}{39} + \frac{25}{39} \mid \text{add numerators} \\
 & = \frac{30}{39} \mid \text{reduce} \\
 & = \frac{10}{13}
 \end{aligned}$$

$$\begin{aligned}
 \text{g) } & \frac{5}{36} + \frac{19}{36} - \frac{5}{9} \mid \text{convert to like quantities (lcm): 36} \\
 & = \frac{5}{36} + \frac{19}{36} - \frac{20}{36} \mid \text{add numerators} \\
 & = \frac{4}{36} \mid \text{reduce} \\
 & = \frac{1}{9}
 \end{aligned}$$

$$\begin{aligned}
 \text{h) } & \frac{15}{37} + \frac{19}{37} - \frac{13}{37} \mid \text{convert to like quantities (lcm): 37} \\
 & = \frac{15}{37} + \frac{19}{37} - \frac{13}{37} \mid \text{add numerators} \\
 & = \frac{21}{37}
 \end{aligned}$$

2)

Calculate the result.

Quick:  
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$$\begin{aligned}
 \text{a) } & 8\frac{6}{11} + 2 - \frac{4}{11} - 2 \mid \text{convert to like quantities (lcm): 11} \\
 & = \frac{94}{11} + \frac{22}{11} - \frac{4}{11} - \frac{22}{11} \mid \text{add numerators} \\
 & = \frac{90}{11} = 8\frac{2}{11}
 \end{aligned}$$

$$\begin{aligned}
 \text{b) } & \frac{1}{7} - \frac{3}{28} + \frac{4}{21} + \frac{25}{84} \mid \text{convert to like quantities (lcm): 84} \\
 & = \frac{12}{84} - \frac{9}{84} + \frac{16}{84} + \frac{25}{84} \mid \text{add numerators} \\
 & = \frac{44}{84} \mid \text{reduce} \\
 & = \frac{11}{21}
 \end{aligned}$$

$$\begin{aligned}
 \text{c) } & 2\frac{8}{43} - 1\frac{17}{43} + 2\frac{8}{43} - 2\frac{13}{43} \mid \text{convert to like quantities (lcm): 43} \\
 & = \frac{94}{43} - \frac{60}{43} + \frac{94}{43} - \frac{99}{43} \mid \text{add numerators} \\
 & = \frac{29}{43}
 \end{aligned}$$

$$\begin{aligned}
 \text{d) } & 5\frac{3}{5} + 5\frac{11}{15} + 6\frac{8}{15} - 8\frac{13}{15} \mid \text{convert to like quantities (lcm): 15} \\
 & = \frac{84}{15} + \frac{86}{15} + \frac{98}{15} - \frac{133}{15} \mid \text{add numerators} \\
 & = \frac{135}{15} \mid \text{reduce} \\
 & = \frac{9}{1} = 9
 \end{aligned}$$

3)

Calculate the result.

Quick:  
6408

$$\begin{aligned}
 \text{a) } & \frac{8}{1} + \frac{35}{9} \mid \text{convert to like quantities (lcm): 9} \\
 & = \frac{72}{9} + \frac{35}{9} \mid \text{add numerators} \\
 & = \frac{107}{9} = 11\frac{8}{9}
 \end{aligned}$$

$$\begin{aligned}
 \text{b) } & \frac{8}{13} + \frac{29}{78} \mid \text{convert to like quantities (lcm): 78} \\
 & = \frac{48}{78} + \frac{29}{78} \mid \text{add numerators} \\
 & = \frac{77}{78}
 \end{aligned}$$

$$\begin{aligned}
 \text{c) } & \frac{25}{11} + \frac{97}{11} \mid \text{convert to like quantities (lcm): 11} \\
 & = \frac{25}{11} + \frac{97}{11} \mid \text{add numerators} \\
 & = \frac{122}{11} = 11\frac{1}{11}
 \end{aligned}$$

$$\begin{aligned}
 \text{d) } & \frac{44}{53} + \frac{98}{53} \mid \text{convert to like quantities (lcm): 53} \\
 & = \frac{44}{53} + \frac{98}{53} \mid \text{add numerators} \\
 & = \frac{142}{53} = 2\frac{36}{53}
 \end{aligned}$$

$$\begin{aligned}
 \text{e) } & \frac{86}{5} + \frac{61}{5} \mid \text{convert to like quantities (lcm): 5} \\
 & = \frac{86}{5} + \frac{61}{5} \mid \text{add numerators} \\
 & = \frac{147}{5} = 29\frac{2}{5}
 \end{aligned}$$

$$\begin{aligned}
 \text{f) } & \frac{47}{44} + \frac{19}{22} \mid \text{convert to like quantities (lcm): 44} \\
 & = \frac{47}{44} + \frac{38}{44} \mid \text{add numerators} \\
 & = \frac{85}{44} = 1\frac{41}{44}
 \end{aligned}$$

g)  $\frac{16}{45} + \frac{16}{15}$  | convert to like quantities (lcm): 45

$$= \frac{16}{45} + \frac{48}{45} \text{ | add numerators}$$

$$= \frac{64}{45} = 1\frac{19}{45}$$

h)  $\frac{32}{27} + \frac{29}{18}$  | convert to like quantities (lcm): 54

$$= \frac{64}{54} + \frac{87}{54} \text{ | add numerators}$$

$$= \frac{151}{54} = 2\frac{43}{54}$$

i)  $\frac{5}{37} + \frac{97}{74}$  | convert to like quantities (lcm): 74

$$= \frac{10}{74} + \frac{97}{74} \text{ | add numerators}$$

$$= \frac{107}{74} = 1\frac{33}{74}$$

j)  $\frac{41}{9} + \frac{56}{9}$  | convert to like quantities (lcm): 9

$$= \frac{41}{9} + \frac{56}{9} \text{ | add numerators}$$

$$= \frac{97}{9} = 10\frac{7}{9}$$

4)

Calculate the result.

Quick:  
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a)  $\frac{8}{87} - \frac{4}{87} + \frac{23}{87} + \frac{43}{87}$  | convert to like quantities (lcm): 87

$$= \frac{8}{87} - \frac{4}{87} + \frac{23}{87} + \frac{43}{87} \text{ | add numerators}$$

$$= \frac{70}{87}$$

b)  $\frac{3}{25} - \frac{1}{15} + \frac{34}{75} - \frac{32}{75}$  | convert to like quantities (lcm): 75

$$= \frac{9}{75} - \frac{5}{75} + \frac{34}{75} - \frac{32}{75} \text{ | add numerators}$$

$$= \frac{6}{75} \text{ | reduce}$$

$$= \frac{2}{25}$$

- c)  $\frac{2}{39} + \frac{5}{13} - \frac{8}{39} + \frac{9}{13}$  | convert to like quantities (lcm): 39  
 $= \frac{2}{39} + \frac{15}{39} - \frac{8}{39} + \frac{27}{39}$  | add numerators  
 $= \frac{36}{39}$  | reduce  
 $= \frac{12}{13}$
- d)  $\frac{38}{85} + \frac{32}{85} - \frac{24}{85} - \frac{8}{85}$  | convert to like quantities (lcm): 85  
 $= \frac{38}{85} + \frac{32}{85} - \frac{24}{85} - \frac{8}{85}$  | add numerators  
 $= \frac{38}{85}$
- e)  $\frac{55}{86} - \frac{15}{86} - \frac{9}{43} - \frac{1}{43}$  | convert to like quantities (lcm): 86  
 $= \frac{55}{86} - \frac{15}{86} - \frac{18}{86} - \frac{2}{86}$  | add numerators  
 $= \frac{20}{86}$  | reduce  
 $= \frac{10}{43}$
- f)  $\frac{16}{77} - \frac{1}{11} + \frac{20}{77} + \frac{39}{77}$  | convert to like quantities (lcm): 77  
 $= \frac{16}{77} - \frac{7}{77} + \frac{20}{77} + \frac{39}{77}$  | add numerators  
 $= \frac{68}{77}$
- g)  $\frac{4}{45} + \frac{4}{15} + \frac{4}{45} + \frac{7}{15}$  | convert to like quantities (lcm): 45  
 $= \frac{4}{45} + \frac{12}{45} + \frac{4}{45} + \frac{21}{45}$  | add numerators  
 $= \frac{41}{45}$
- h)  $\frac{5}{72} - \frac{1}{24} - \frac{1}{72} + \frac{7}{8}$  | convert to like quantities (lcm): 72  
 $= \frac{5}{72} - \frac{3}{72} - \frac{1}{72} + \frac{63}{72}$  | add numerators  
 $= \frac{64}{72}$  | reduce  
 $= \frac{8}{9}$
- i)  $\frac{2}{7} - \frac{5}{28} + \frac{11}{42} - \frac{13}{42}$  | convert to like quantities (lcm): 84  
 $= \frac{24}{84} - \frac{15}{84} + \frac{22}{84} - \frac{26}{84}$  | add numerators  
 $= \frac{5}{84}$

$$\begin{aligned} \text{j) } & \frac{11}{73} - \frac{5}{73} + \frac{13}{73} + \frac{31}{73} \mid \text{convert to like quantities (lcm): } 73 \\ & = \frac{11}{73} - \frac{5}{73} + \frac{13}{73} + \frac{31}{73} \mid \text{add numerators} \\ & = \frac{50}{73} \end{aligned}$$

Good Luck!