



# Warm Up

Grade 9

Determine the sum of each of the following

$$1) \quad -\frac{3}{7} + \left(-\frac{3}{7}\right) = \underline{-\frac{6}{7}}$$

$$2) \quad \begin{array}{l} \text{a) } 2.7 + 1.8 \\ \text{b) } -3.7 + 4.5 \\ \text{c) } 2.7 + (-8.7) \end{array}$$

$$\begin{array}{r} 4.5 \\ + 0.8 \\ \hline -6 \end{array}$$

# Class/Homework

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Don't just give answers copy down the addition statement (Not directions)



- 5 (bc) Use Calculators no # line needed
- 6 (all) Use Calculators no # line needed
- 7 (ac) Leave in fractional form (no calculator)
- 9 (acf) Use Calculators

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$$5. b) \quad -3 + (-2) = -5 \quad -3.8 + (-2.4) = \underline{-6.2}$$

$$c) \quad -3 + 2 = -1 \quad -3.8 + 2.4 = \underline{-1.4}$$

$$6. \quad -4.2$$

$$\begin{array}{r} -1.9 + (-2.3) \\ (-2.3) + (-1.9) \end{array}$$

$$7a) \quad 9 + 3 = 12 \quad c) \quad \begin{array}{r} -9 + 3 \\ -6 \end{array}$$

$$\frac{9}{2} + \frac{3}{2} = \frac{12}{2} = 6 \quad -\frac{9}{2} + \frac{3}{2} = \frac{-6}{2} = -3$$

$$9. a) \quad 5.6 + 3.2 \quad c) \quad -0.325 + (-32.5)$$

$$\begin{array}{r} -0.4 \\ \hline 5.6 \\ + 3.2 \\ \hline 8.8 \end{array} \quad \begin{array}{r} -32.825 \\ \hline 0.325 \\ \hline 32.825 \end{array}$$



Find a by determining the LCM.

Lowest  
Common  
Multiple

$$f) \quad -17.84 + (-0.098)$$

$$\begin{array}{r} -17.84 \\ + (-0.098) \\ \hline -17.938 \end{array}$$

Find a common denominator:

$$\frac{4}{5} + \frac{8}{3}$$

$$= \frac{12}{15} + \frac{40}{15}$$

$$= \frac{52}{15}$$

$$= 3\frac{1}{15}$$

Multiples	
5	3
5 x 1 = 5	3 x 1 = 3
5 x 2 = 10	3 x 2 = 6
5 x 3 = 15	3 x 3 = 9
5 x 4 = 20	3 x 4 = 12
25	LCM 3 x 5 = 15
30	18
35	21
40	24
45	27

$$\frac{3}{4} + \frac{-5}{6}$$

$$= \frac{9}{12} + \frac{-10}{12}$$

$$= \frac{-1}{12}$$

Find the LCM first!

Multiples of 4 and 6:

4	4	8	(12)	16	20
6	6	(12)	18		



$$\frac{3}{4} + \frac{-5}{6}$$

$$= \frac{18}{24} + \frac{-20}{24}$$

$$= \frac{-2}{24} = \frac{-1}{12}$$

What about mixed numbers?

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

Step 1: Write each mixed number as an improper fraction.



$$\frac{7}{3} + \frac{13}{5}$$

LCM

Step 2: Find a common denominator, and then add numerators.

$$\frac{35}{15} + \frac{39}{15} = \frac{74}{15} = 4\frac{14}{15}$$

Practice!

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

Improper  $\frac{47}{8} + \left(\frac{-7}{2}\right) \times 4$

$$\frac{47}{8} + \frac{-28}{8}$$

$$+ \frac{19}{8} = 2\frac{3}{8}$$

$$2) (-1\frac{2}{3}) + (-2\frac{1}{4})$$

$$\begin{aligned} & -\frac{5}{3} + \left(-\frac{9}{4}\right) \\ & -\frac{20}{12} + \left(-\frac{27}{12}\right) \\ & -\frac{47}{12} \end{aligned}$$



Classwork / Homework:

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8 (all) Leave in fractional form (no calculator)  
9 (bde) Use Calculators

11(acegi) (Without calculator)

