

Name Jack Date _____

1. Estimate each sum or difference to the nearest whole or half by rounding. Explain your estimate using words or a number line.

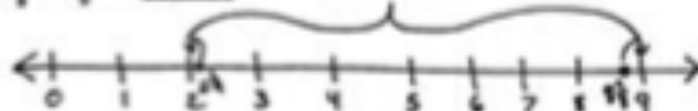
a. $2\frac{1}{12} + 1\frac{1}{6} = \underline{4}$

$2\frac{1}{12}$ and $1\frac{1}{6}$ are both close to 2. $2+2=4$

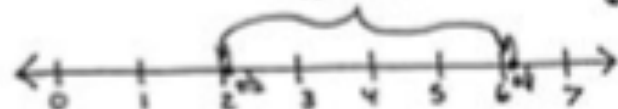
b. $1\frac{11}{12} + 5\frac{1}{4} = \underline{8}$

$1\frac{11}{12}$ is a little less than 2. $5\frac{1}{4}$ is a little less than 6.
 $2+6=8$

c. $8\frac{1}{2} - 2\frac{1}{2} = \underline{7}$ estimated difference $9-2=7$



d. $6\frac{1}{2} - 2\frac{1}{2} = \underline{4}$ estimated difference $6-2=4$



e. $3\frac{1}{8} + 5\frac{1}{4} = \underline{8\frac{1}{2}}$

$3\frac{1}{8}$ is close to $3\frac{1}{2}$.

$5\frac{1}{4}$ is close to 5.

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

2. Estimate each sum or difference to the nearest whole or half by rounding. Explain your estimate using words or a number line.

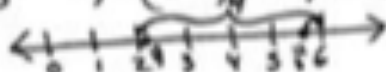
a. $\frac{11}{2} + \frac{11}{2} = \underline{6}$

$\frac{16}{3} = (3 \times \frac{2}{3}) + \frac{1}{3} = 3\frac{1}{3}$ $\frac{11}{4} = (2 \times \frac{2}{4}) + \frac{3}{4} = 2\frac{3}{4}$ $3 + 3 = 6$

3. Rounding each number to the nearest whole and then finding the sum of the rounded numbers.

b. $\frac{11}{2} - \frac{11}{2} = \underline{4}$

$\frac{17}{3} = (5 \times \frac{2}{3}) + \frac{2}{3} = 5\frac{2}{3}$ $\frac{15}{7} = (2 \times \frac{2}{7}) + \frac{1}{7} = 2\frac{1}{7}$ $6 - 2 = 4$

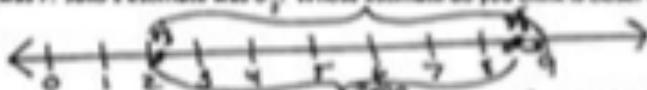


c. $\frac{32}{10} + \frac{32}{10} = \underline{8\frac{1}{2}}$

$\frac{32}{10}$ is close to $\frac{60}{10}$. $\frac{60}{10} = 6$

$\frac{36}{10} = \frac{20}{10} + \frac{16}{10} + \frac{6}{10} = 2\frac{6}{10}$ $2\frac{6}{10}$ is close to $2\frac{1}{2}$. $6 + 2\frac{1}{2} = 8\frac{1}{2}$

3. Montoya's estimate for $8\frac{1}{2} - 2\frac{1}{2}$ was 7. Julio's estimate was $6\frac{1}{2}$. Whose estimate do you think is closer to the actual difference? Explain.



Montoya's estimate was $9 - 2 = 7$. She rounded one number up and the other down which makes a greater difference. Julio knew that $8\frac{1}{2}$ is close to $8\frac{1}{2}$. He subtracted 2 and got $6\frac{1}{2}$. I think Julio is closer to the actual difference because he rounded both numbers down just a little bit.

4. Use benchmark numbers or mental math to estimate the sum or difference.

a. $14\frac{1}{2} + 29\frac{1}{2} \approx 45$ $15 + 30 = 45$	b. $3\frac{1}{2} + 54\frac{1}{2} \approx 58$ $3\frac{1}{2} + 54\frac{1}{2} = 57 + 1 = 58$
c. $17\frac{1}{2} - 8\frac{1}{2} \approx 9\frac{1}{2}$ $18 - 8\frac{1}{2} = 9\frac{1}{2}$	d. $\frac{11}{2} - \frac{11}{2} \approx 2$ $\frac{65}{8} \approx \frac{64}{8}$

$8\frac{1}{2} \rightarrow 9 \rightarrow 18$

$\frac{65}{8} \approx \frac{64}{8}$ $\frac{64}{8} = 8$ $8 - 6 = 2$
 $\frac{32}{6} \approx \frac{36}{6}$ $\frac{36}{6} = 6$