

Session 19 Unit Six Post-Assessment (cont.)

| PROBLEM 8 | SCORING: 1 POINT POSSIBLE |
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| <p>8 ___ Use numbers or labeled sketches to show that $\frac{2}{3}$ and $\frac{4}{6}$ name the same amount as $\frac{1}{3}$.</p> <p>Sample: $\frac{1 \times 2 = 2}{3 \times 2 = 6}$ $\frac{1 \times 3 = 3}{3 \times 3 = 9}$ If you multiply the numerator and denominator in $\frac{1}{3}$ by 2, you get $\frac{2}{6}$. If you do the same thing with 3, you get $\frac{3}{9}$.</p> | <ul style="list-style-type: none"> 1 point for any combination of numbers and words that demonstrates an understanding of how and why $\frac{2}{6}$ and $\frac{3}{9}$ are both equivalent to $\frac{1}{3}$. |
| <p>Comments</p> <p>The sample above involves multiplying the numerator and denominator by the same number to generate equivalent fractions. Some students might use this method, while others may use labeled sketches. At this point, labeled sketches that clearly use the same unit wholes demonstrate an understanding of fractions that is just as solid as the understanding required for numeric methods.</p> | |

| PROBLEM 9 | SCORING: 3 POINTS POSSIBLE |
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| <p>9 ___ Use numbers, words, or labeled sketches to prove that $\frac{2}{3} + \frac{1}{6}$ does not equal $\frac{3}{6}$. Be sure to show the correct answer in your explanation.</p> <p>Sample: Since $\frac{2}{3}$ is the same as $\frac{4}{6}$, there's no way that $\frac{2}{3}$ plus another $\frac{1}{6}$ could be $\frac{3}{6}$. To get the right answer, you have to turn both fractions into 6ths and then add them.</p> $\frac{2 \times 2 = 4}{3 \times 2 = 6} \quad \frac{4}{6} + \frac{1}{6} = \frac{5}{6}$ | <ul style="list-style-type: none"> 1 point for any combination of numbers, words, or labeled sketches that explains why $\frac{2}{3} + \frac{1}{6}$ does not equal $\frac{3}{6}$. 1 point for the correct answer: $\frac{5}{6}$. 1 point for any combination of words, numbers, and/or labeled sketches that shows how the student got the answer. |
| <p>Comments</p> <p>The sample above is numeric, but labeled sketches are just as effective and demonstrate an equally sound understanding of fractions.</p> | |

| PROBLEM 10 | SCORING: 2 POINTS POSSIBLE |
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| <p>10a Danny wanted to do a $1\frac{1}{2}$ mile run with his friend on Sunday but he got a cramp in his leg and had to stop after $\frac{3}{4}$ of a mile. How much of the run did he miss?</p> <p>b ___ Use numbers, words, and/or labeled sketches to explain your answer.</p> <p>Sample: Since there are 8 eighths in a whole, $1\frac{1}{2} = \frac{12}{8}$. Also, $\frac{3}{4} = \frac{6}{8}$.</p> $\frac{12}{8} - \frac{6}{8} = \frac{6}{8} = 1\frac{1}{8} \quad \text{He missed out on } \frac{6}{8} \text{ or } 1\frac{1}{8} \text{ of a mile of the run.}$ | <ul style="list-style-type: none"> 1 point for the correct answer: $\frac{6}{8}$ or $1\frac{1}{8}$. 1 point for any combination of words, numbers, and/or labeled sketches that shows how the student got the answer. |
| <p>Comments</p> <p>The sample above is numeric, but labeled sketches are just as effective and demonstrate an equally sound understanding of fractions.</p> | |

| PROBLEM 11 | SCORING: 1 POINT POSSIBLE |
|---|---|
| <p>11 ___ Circle the fraction that means the same thing as 25%.</p> <p>$\frac{1}{4}$ $\frac{2}{5}$ $\frac{1}{2}$</p> | <ul style="list-style-type: none"> 1 point for the correct answer: $\frac{1}{4}$. |