A Story of Units[®]

Eureka Math[™] Grade 4, Module 5

Student File_B

Contains Sprint and Fluency, Exit Ticket, and Assessment Materials

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Sprint and Fluency Packet

A

Multiply Whole Numbers Times Fractions

1.	$\frac{1}{3} + \frac{1}{3} =$	
2.	$2 \times \frac{1}{3} =$	
3.	$\frac{1}{\frac{1}{4} + \frac{1}{4} + \frac{1}{4}} =$	
4.	$3 \times \frac{1}{4} =$	
5.	$\frac{1}{5} + \frac{1}{5} =$	
6.	$2 \times \frac{1}{5} =$	
7.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
8.	$3 \times \frac{1}{5} =$	
9.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
10.	$4 \times \frac{1}{5} =$	
11.	$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} =$	
12.	$3 \times \frac{1}{10} =$	
13.	$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$	
14.	$3 \times \frac{1}{8} =$	
15.	$\frac{1}{2} + \frac{1}{2} =$	
16.	$2 \times \frac{1}{2} =$	
17.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
18.	$3 \times \frac{1}{3} =$	
19.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
20.	$4 \times \frac{1}{4} =$	
21.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	
22.	$3 \times \frac{1}{2} =$	

23.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
24.	$4 \times \frac{1}{3} =$	
25.	$\frac{5}{6} =$	$\times \frac{1}{6}$
26.	$\frac{5}{6} =$	5 × —
27.	$\frac{5}{6} = \frac{5}{8} =$	5 × —
28.	$\frac{5}{8} =$	$\times\frac{1}{8}$
29.	$\frac{7}{8} =$	7 × —
30.	$\frac{7}{10} =$	7 × —
31.	$\frac{7}{8} =$	× 1/8
32.	$\frac{7}{10} =$	$ \times \frac{1}{10}$
33.	$\frac{6}{6} =$	6 × —
34.	1 =	6 × —
35.	$\frac{8}{8} =$	$ \times \frac{1}{8}$
36.	1 =	$\times\frac{1}{8}$
37.	$9 \times \frac{1}{10} =$	
38.	$7 \times \frac{1}{5} =$	
39.	1 =	3 × —
40.	$7 \times \frac{1}{12} =$	
41.	1 =	$ \times \frac{1}{5}$
42.	$\frac{\frac{3}{5}}{\frac{1}{4}} =$	$\frac{1}{5} + \frac{1}{5} + -$
43.	$3 \times \frac{1}{4} =$	5 5 - + $\frac{1}{4}$ + $\frac{1}{4}$
44.	1 =	-+ -+



Improvement: _____

B

Multiply Whole Numbers Times Fractions

1.	$\frac{1}{5} + \frac{1}{5} =$	
1.		
2.	$2 \times \frac{1}{5} =$	
3.	$\frac{1}{3} + \frac{1}{3} =$	
4.	$2 \times \frac{1}{3} =$	
5.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
6.	$3 \times \frac{1}{4} =$	
7.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
8.	$3 \times \frac{1}{5} =$	
9.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
10.	$4 \times \frac{1}{5} =$	
11.	$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$	
12.	$3 \times \frac{1}{8} =$	
13.	$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} =$	
14.	$3 \times \frac{1}{10} =$	
15.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
16.	$3 \times \frac{1}{3} =$	
17.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
18.	$4 \times \frac{1}{4} =$	
19.	$\frac{1}{2} + \frac{1}{2} =$	
20.	$2 \times \frac{1}{2} =$	
21.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
22.	$4 \times \frac{1}{3} =$	

23.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	
24.	$3 \times \frac{1}{2} =$	
25.	$\frac{5}{6} =$	$ \times \frac{1}{6}$
26.	$\frac{5}{6} =$ $\frac{5}{6} =$ $\frac{5}{8} =$	5 × —
27.	$\frac{5}{8} =$	5 × —
28.	$\frac{5}{8} =$	$\times\frac{1}{8}$
29.	$\frac{7}{8} =$	7 × —
30.	$\frac{7}{10} =$	7 × —
31.	$\frac{7}{8} =$	× 1/8
32.	$\frac{7}{10} =$	$ \times \frac{1}{10}$
33.	$\frac{8}{8} =$	8 × —
34.	1 =	8 × —
35.	$\frac{6}{6} =$	$\times \frac{1}{6}$
36.	1 =	$ \times \frac{1}{6}$
37.	$5 \times \frac{1}{12} =$	
38.	$6 \times \frac{1}{5} =$	
39.	1 =	4 × —
40.	$9 \times \frac{1}{10} =$	
41.	1 =	$\times\frac{1}{3}$
42.	$\frac{3}{4} =$	$\frac{1}{4} + \frac{1}{4} + -$
43.	$3 \times \frac{1}{5} =$	$-+\frac{1}{5}+\frac{1}{5}$
44.	1 =	-+ -+ -+



A

Subtract Fractions

1.	2 – 1 =	
2.	$\frac{2}{2} - \frac{1}{2} =$	
3.	$1 - \frac{1}{2} =$	
4.	3 – 1 =	
5.	$\frac{3}{3} - \frac{1}{3} =$	
6.	$1 - \frac{1}{3} =$	
7.	8 – 1 =	
8.	$\frac{8}{8} - \frac{1}{8} =$	
9.	$1 - \frac{1}{8} =$	
10.	5 – 1 =	
11.	$\frac{5}{5} - \frac{1}{5} =$	
12.	$1 - \frac{1}{5} =$	
13.	$1 - \frac{2}{5} =$	
14.	$1 - \frac{2}{5} =$ $1 - \frac{4}{5} =$	
15.	$1 - \frac{3}{5} =$	
16.	$1 - \frac{1}{4} =$	
17.	$1 - \frac{3}{4} =$	
18.	$1 - \frac{1}{10} =$	
19.	$1 - \frac{9}{10} =$	
20.	$1 - \frac{3}{10} =$	
21.	$1 - \frac{7}{10} =$	
22.	4 – 2 =	

23.	$\frac{4}{3} - \frac{2}{3} =$	
24.	$1\frac{1}{3} - \frac{2}{3} =$	
25.	$1\frac{2}{3} - \frac{1}{3} =$	
26.	7 – 4 =	
27.	$\frac{7}{5} - \frac{4}{5} =$	
28.	$1\frac{2}{5}-\frac{4}{5}=$	
29.	$1\frac{4}{5}-\frac{2}{5}=$	
30.	5 – 3 =	
31.	$\frac{5}{4} - \frac{3}{4} =$	
32.	$1\frac{1}{4} - \frac{3}{4} =$	
33.	$1\frac{3}{4} - \frac{1}{4} =$	
34.	$1 - \frac{3}{8} =$	
35.	$1 - \frac{7}{8} =$	
36.	$1\frac{7}{8} - \frac{3}{8} =$	
37.	$1\frac{3}{8}-\frac{7}{8}=$	
38.	$1 - \frac{1}{6} =$	
39.	$1 - \frac{5}{6} =$	
40.	$1\frac{5}{6} - \frac{1}{6} =$	
41.	$1\frac{1}{6} - \frac{5}{6} =$	
42.	$1 - \frac{5}{12} =$	
43.	$1\frac{1}{12} - \frac{7}{12} =$	
44.	$1\frac{4}{15} - \frac{13}{15} =$	



Lesson 21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12.

B

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Subtract Fractions

1.	3 – 1 =	
2.	$\frac{\frac{3}{3} - \frac{1}{3}}{1 - \frac{1}{3}} =$	
3.	$1 - \frac{1}{3} =$	
4.	2 – 1 =	
5.	$\frac{2}{2} - \frac{1}{2} =$	
6.	$1 - \frac{1}{2} =$	
7.	6 – 1 =	
8.	$\frac{6}{6} - \frac{1}{6} =$	
9.	$1 - \frac{1}{6} =$	
10.	10 – 1 =	
11.	$\frac{10}{10} - \frac{1}{10} =$	
12.	$1 - \frac{1}{10} =$	
13.	$1 - \frac{2}{10} =$	
14.	$1 - \frac{4}{10} =$	
15.	$1 - \frac{3}{10} =$	
16.	$1 - \frac{1}{5} =$	
17.	$1 - \frac{4}{5} =$	
18.	$1 - \frac{1}{8} =$	
19.	$1 - \frac{7}{8} =$	
20.	$1 - \frac{3}{8} =$	
21.	$1 - \frac{5}{8} =$	
22.	5 – 3 =	

Number Correct: _____

Improvement: _____

23. $\frac{5}{4} - \frac{3}{4} =$ 24. $1\frac{1}{4} - \frac{3}{4} =$ 25. $1\frac{3}{4} - \frac{1}{4} =$ 26. $8 - 4 =$ 27. $\frac{8}{5} - \frac{4}{5} =$ 28. $1\frac{3}{5} - \frac{4}{5} =$ 29. $1\frac{4}{5} - \frac{3}{5} =$ 30. $7 - 5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
25. $1\frac{3}{4} - \frac{1}{4} =$ 26. $8 - 4 =$ 27. $\frac{8}{5} - \frac{4}{5} =$ 28. $1\frac{3}{5} - \frac{4}{5} =$ 29. $1\frac{4}{5} - \frac{3}{5} =$ 30. $7 - 5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
26. $8-4 =$ 27. $\frac{8}{5} - \frac{4}{5} =$ 28. $1\frac{3}{5} - \frac{4}{5} =$ 29. $1\frac{4}{5} - \frac{3}{5} =$ 30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
27. $\frac{8}{5} - \frac{4}{5} =$ 28. $1\frac{3}{5} - \frac{4}{5} =$ 29. $1\frac{4}{5} - \frac{3}{5} =$ 30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
28. $1\frac{3}{5} - \frac{4}{5} =$ 29. $1\frac{4}{5} - \frac{3}{5} =$ 30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
30. $7-5 =$ 31. $\frac{7}{6} - \frac{5}{6} =$ 32. $1\frac{1}{6} - \frac{5}{6} =$
32. $1\frac{1}{6} - \frac{5}{6} =$
32. $1\frac{1}{6} - \frac{5}{6} =$
.5 1
33. $1\frac{5}{6} - \frac{1}{6} =$
34. $1 - \frac{5}{8} =$
35. $1 - \frac{7}{8} =$
36. $1\frac{7}{8} - \frac{5}{8} =$
37. $1\frac{5}{8} - \frac{7}{8} =$
38. $1 - \frac{1}{4} =$
39. $1 - \frac{3}{4} =$
40. $1\frac{3}{4} - \frac{1}{4} =$
41. $1\frac{1}{4} - \frac{3}{4} =$
42. $1 - \frac{7}{12} =$
43. $1\frac{1}{12} - \frac{5}{12} =$
$44. 1\frac{7}{15} - \frac{11}{15} =$



Lesson 21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12.

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A Add Fractions

1.	1 + 1 =	
2.	$\frac{1}{5} + \frac{1}{5} =$	
3.	2 + 1 =	
4.	$\frac{2}{5} + \frac{1}{5} =$	
5.	2 + 2 =	
6.	$\frac{2}{5} + \frac{2}{5} =$	
7.	3 + 2 =	
8.	$\frac{3}{5} + \frac{2}{5} =$	fift
9.	$\frac{5}{5} =$	
10.	$\frac{3}{5} + \frac{2}{5} =$	
11.	3 + 2 =	
12.	$\frac{3}{8} + \frac{2}{8} =$	
13.	3 + 2 + 2 =	
14.	$\frac{3}{8} + \frac{2}{8} + \frac{2}{8} =$	
15.	$\frac{3}{8} + \frac{3}{8} + \frac{2}{8} =$	eight
16.	$\frac{8}{8} =$	
17.	$\frac{3}{8} + \frac{3}{8} + \frac{2}{8} =$	
18.	2 + 1 + 1 =	
19.	$\frac{2}{3} + \frac{1}{3} + \frac{1}{3} =$	thir
20.	$\frac{2}{3} + \frac{1}{3} + \frac{1}{3} =$	$1{3}$
21.	2 + 2 + 2 =	
22.	$\frac{2}{5} + \frac{2}{5} + \frac{2}{5} =$	fift

23.	$\frac{2}{5} + \frac{2}{5} + \frac{2}{5} =$	$1{5}$
24.	3 + 3 + 3 =	
25.	$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} =$	eighths
26.	$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} =$	$1{8}$
27.	$\frac{5}{8} + \frac{5}{8} + \frac{5}{8} =$	$1{8}$
28.	1 + 1 + 1 =	
29.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	halves
30.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	$1{2}$
31.	4 + 4 + 4 =	
32.	$\frac{4}{10} + \frac{4}{10} + \frac{4}{10} =$	tenths
33.	$\frac{4}{10} + \frac{4}{10} + \frac{4}{10} =$	$1\frac{1}{10}$
34.	$\frac{6}{10} + \frac{6}{10} + \frac{6}{10} =$	$1{10}$
35.	2 + 2 + 2 =	
36.	$\frac{2}{6} + \frac{2}{6} + \frac{2}{6} =$	sixths
37.	$\frac{2}{6} + \frac{2}{6} + \frac{2}{6} =$	
38.	$\frac{3}{6} + \frac{3}{6} + \frac{3}{6} =$	1_6
39.	$\frac{5}{12} + \frac{2}{12} + \frac{4}{12} =$	
40.	$\frac{4}{12} + \frac{4}{12} + \frac{4}{12} =$	
41.	$\frac{5}{12} + \frac{5}{12} + \frac{7}{12} =$	$1{12}$
42.	$\frac{7}{12} + \frac{9}{12} + \frac{7}{12} =$	$1\frac{1}{12}$
43.	$\frac{7}{15} + \frac{8}{15} + \frac{7}{15} =$	$1\frac{1}{15}$
44.	$\frac{12}{15} + \frac{8}{15} + \frac{9}{15} =$	$1{15}$



Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models.

B

Add Fractions

	1 4	
1.	1 + 1 =	
2.	$\frac{1}{6} + \frac{1}{6} =$	
3.	3 + 1 =	
4.	$\frac{3}{6} + \frac{1}{6} =$	
5.	3 + 2 =	
6.	$\frac{3}{6} + \frac{2}{6} =$	
7.	4 + 2 =	
8.	$\frac{4}{6} + \frac{2}{6} =$	sixths
9.	$\frac{\frac{6}{6}}{\frac{4}{6}} = \frac{\frac{4}{6}}{\frac{2}{6}} = \frac{1}{6}$	
10.	$\frac{4}{6} + \frac{2}{6} =$	
11.	5 + 2 =	
12.	$\frac{5}{8} + \frac{2}{8} =$	
13.	5 + 1 + 1 =	
14.	$\frac{5}{8} + \frac{1}{8} + \frac{1}{8} =$	
15.	$\frac{5}{8} + \frac{2}{8} + \frac{1}{8} =$	eighths
16.	$\frac{8}{8} =$	
17.	$\frac{3}{8} + \frac{3}{8} + \frac{2}{8} =$	
18.	1+ 1 + 2 =	
19.	$\frac{1}{3} + \frac{1}{3} + \frac{2}{3} =$	thirds
20.	$\frac{1}{3} + \frac{1}{3} + \frac{2}{3} =$	$1{3}$
21.	3 + 3 + 3 =	
22.	$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} =$	eighths

Number Correct:

Improvement: _____

23.	$\frac{3}{8} + \frac{3}{8} + \frac{3}{8} =$	$1{8}$
24.	1 + 1 + 1 =	
25.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	halves
26.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	$1{2}$
27.	2 + 2 + 2 =	
28.	$\frac{2}{5} + \frac{2}{5} + \frac{2}{5} =$	fifths
29.	$\frac{2}{5} + \frac{2}{5} + \frac{2}{5} =$	$1{5}$
30.	$\frac{3}{5} + \frac{3}{5} + \frac{3}{5} =$	$1{5}$
31.	6 + 6 + 6 =	
32.	$\frac{6}{10} + \frac{6}{10} + \frac{6}{10} =$	tenths
33.	$\frac{6}{10} + \frac{6}{10} + \frac{6}{10} =$	$1\frac{1}{10}$
34.	$\frac{5}{10} + \frac{5}{10} + \frac{5}{10} =$	$1\frac{1}{10}$
35.	2 + 2 + 2 =	
36.	$\frac{2}{6} + \frac{2}{6} + \frac{2}{6} =$	sixths
37.	$\frac{2}{6} + \frac{2}{6} + \frac{2}{6} =$	
38.	$\frac{3}{6} + \frac{3}{6} + \frac{3}{6} =$	$1{6}$
39.	$\frac{5}{12} + \frac{3}{12} + \frac{3}{12} =$	
40.	$\frac{5}{12} + \frac{5}{12} + \frac{2}{12} =$	
41.	$\frac{6}{12} + \frac{5}{12} + \frac{6}{12} =$	$1\frac{1}{12}$
42.	$\frac{8}{12} + \frac{10}{12} + \frac{5}{12} =$	$1\frac{1}{12}$
43.	$\frac{7}{15} + \frac{7}{15} + \frac{8}{15} =$	$1\frac{1}{15}$
44.	$\frac{13}{15} + \frac{9}{15} + \frac{7}{15} =$	$1{15}$



Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models.

Number Correct:

A

1.	3 = 2 +
2.	$\frac{3}{2} = \frac{2}{2} + \frac{1}{2}$
3.	$\frac{3}{2} = 1 + \frac{1}{2}$
4.	$\frac{3}{2} = 1\frac{1}{2}$
5.	5 = 4 +
6.	$\frac{5}{4} = \frac{4}{4} + \frac{1}{4}$
7.	$\frac{5}{4} = 1 + \frac{1}{4}$
8.	$\frac{5}{4} = 1 \frac{1}{4}$
9.	4 = + 1
10.	$\frac{4}{3} = \frac{1}{3} + \frac{1}{3}$
11.	$\frac{4}{3} = 1 + \frac{1}{3}$
12.	$\frac{4}{3} =\frac{1}{3}$
13.	7 = + 2
14.	$\frac{7}{5} = \frac{1}{5} + \frac{2}{5}$
15.	$\frac{7}{5} = 1 + \frac{1}{5}$
16.	$\frac{7}{5} = 1{5}$
17.	$\frac{8}{5} = 1 \frac{1}{5}$
18.	$\frac{9}{5} = 1 \frac{1}{5}$
19.	$\frac{6}{5} = 1{5}$
20.	$\frac{10}{5} =$
21.	$\frac{1}{5} = \frac{10}{5} + \frac{1}{5}$
22.	$\frac{1}{5} = 2 + \frac{1}{5}$

23.	$\frac{6}{3} =$	
24.	$\frac{1}{3} = \frac{6}{3} + \frac{2}{3}$	
25.	$\frac{8}{3} = \frac{6}{3} + \frac{1}{3}$	
26.	$\frac{8}{3} = 2 + \frac{1}{3}$	
27.	$\frac{8}{3} = 2\frac{1}{3}$	
28.	$\frac{1}{4} = \frac{8}{4} + \frac{1}{4}$	
29.	$\frac{1}{4} = 2 + \frac{1}{4}$	
30.	$\frac{9}{4} = \underline{\qquad} \frac{1}{4}$	
31.	$\frac{11}{4} =\frac{3}{4}$	
32.	$\frac{8}{3} = \frac{1}{3} + \frac{2}{3}$	
33.	$\frac{\frac{8}{3}}{\frac{8}{3}} = \frac{\frac{6}{3}}{\frac{8}{3}} + \frac{\frac{2}{3}}{\frac{8}{3}}$	
34.	$\frac{8}{3} =+ \frac{2}{3}$	
35.	$\frac{8}{3} =\frac{2}{3}$	
36.	$\frac{14}{5} = \frac{10}{5} + \frac{10}{5}$	
37.	$\frac{14}{5} =+ \frac{4}{5}$	
38.	$\frac{14}{5} = 2\frac{1}{5}$	
39.	$\frac{13}{5} = 2\frac{1}{5}$	
40.	$\frac{9}{8} = 1 + \frac{1}{8}$	
41.	$\frac{15}{8} = 1 + \frac{1}{8}$	
42.	$\frac{17}{12} = \frac{1}{12} + \frac{5}{12}$	
43.	$\frac{11}{8} = 1 + \frac{1}{8}$	
44.	$\frac{17}{12} = 1 + \frac{12}{12}$	



Improvement: _____

B

1.	6 = 5 +
2.	$\frac{6}{5} = \frac{5}{5} + \frac{1}{5}$
3.	$\frac{6}{5} = 1 + \frac{1}{5}$
4.	$\frac{6}{5} = 1{5}$
5.	4 = 3 +
6.	$\frac{4}{3} = \frac{3}{3} + \frac{1}{3}$
7.	$\frac{4}{3} = 1 + \frac{1}{3}$
8.	$\frac{4}{3} = 1\frac{1}{3}$
9.	5 = + 1
10.	$\frac{5}{4} = \frac{1}{4} + \frac{1}{4}$
11.	$\frac{5}{4} = 1 + \frac{1}{4}$
12.	$\frac{5}{4} =\frac{1}{4}$
13.	8 = + 3
14.	$\frac{8}{5} = \frac{1}{5} + \frac{3}{5}$
15.	$\frac{8}{5} = 1 + \frac{1}{5}$
16.	$\frac{8}{5} = 1\frac{1}{5}$
17.	$\frac{9}{5} = 1\frac{1}{5}$
18.	$\frac{6}{5} = 1 \frac{1}{5}$
19.	$\frac{7}{5} = 1\frac{1}{5}$
20.	$\frac{6}{3} =$
21.	$\frac{1}{3} = \frac{6}{3} + \frac{1}{3}$
22.	$\frac{1}{3} = 2 + \frac{1}{3}$

23.	$\frac{4}{2} =$	
24.	$\frac{1}{2} = \frac{4}{2} + \frac{1}{2}$	
25.	$\frac{5}{2} = \frac{4}{2} + \frac{1}{2}$	
26.	$\frac{5}{2} = 2 + \frac{1}{2}$	
27.	$\frac{5}{2} = 2\frac{1}{2}$	
28.	$\frac{1}{5} = \frac{10}{5} + \frac{1}{5}$	
29.	$\frac{1}{5} = 2 + \frac{1}{5}$	
30.	$\frac{11}{5} =\frac{1}{5}$	
31.	$\frac{13}{5} =\frac{3}{5}$	
32.	$\frac{5}{3} = \frac{1}{3} + \frac{1}{3}$	
33.	$\frac{5}{2} = \frac{4}{2} + \frac{1}{2}$	
34.	$\frac{5}{2} =+ \frac{1}{2}$	
35.	$\frac{5}{2} =\frac{1}{2}$	
36.	$\frac{12}{5} = \frac{10}{5} + \frac{10}{5}$	
37.	$\frac{12}{5} =+ \frac{2}{5}$	
38.	$\frac{12}{5} = 2\frac{1}{5}$	
39.	$\frac{14}{5} = 2\frac{1}{5}$	
40.	$\frac{9}{8} = 1 + \frac{1}{8}$	
41.	$\frac{11}{8} = 1 + \frac{1}{8}$	
42.	$\frac{19}{12} = \frac{1}{12} + \frac{7}{12}$	
43.	$\frac{15}{8} = 1 + \frac{1}{8}$	
44.	$\frac{19}{12} = 1 + \frac{11}{12}$	



A

1.	3 + 1 =
2.	$\frac{3}{3} + \frac{1}{3} = \frac{1}{3}$
3.	$1 + \frac{1}{3} = \frac{1}{3}$
4.	$1\frac{1}{3} = \frac{1}{3}$
5.	5 + 1 =
6.	$\frac{5}{5} + \frac{1}{5} = \frac{1}{5}$
7.	$1 + \frac{1}{5} = \frac{1}{5}$
8.	$1\frac{1}{5} = \frac{1}{5}$
9.	2 + 1 =
10.	$\frac{2}{2} + \frac{1}{2} = \frac{1}{2}$
11.	$1 + \frac{1}{2} = \frac{1}{2}$
12.	$1\frac{1}{2} = \frac{1}{2}$
13.	$\frac{4}{4} + \frac{1}{4} = \frac{1}{4}$
14.	$1 + \frac{1}{4} = \frac{1}{4}$
15.	$1\frac{1}{4} = \frac{1}{4}$
16.	$1\frac{3}{4} = \frac{1}{4}$
17.	$\frac{5}{5} + \frac{1}{5} = \frac{1}{5}$
18.	$1 + \frac{1}{5} = \frac{1}{5}$
19.	$1\frac{1}{5} = \frac{1}{5}$
20.	$1\frac{3}{5} = \frac{1}{5}$
21.	$\frac{8}{8} + \frac{3}{8} = \frac{1}{8}$
22.	$1 + \frac{3}{8} = \frac{1}{8}$

23.	$1\frac{3}{8} = \frac{1}{8}$
24.	$2 + \frac{1}{3} = 2\frac{1}{3}$
25.	$\frac{6}{3} + \frac{1}{3} = \frac{1}{3}$
26.	$2 + \frac{1}{3} = \frac{1}{3}$
27.	$2\frac{1}{3} = \frac{1}{3}$
28.	$2 + \frac{1}{5} = 2\frac{1}{5}$
29.	$\frac{10}{5} + \frac{1}{5} = \frac{1}{5}$
30.	$2 + \frac{1}{5} = \frac{1}{5}$
31.	$2\frac{1}{5} = \frac{1}{5}$
32.	$\frac{8}{4} + \frac{3}{4} = \frac{1}{4}$
33.	$2 + \frac{3}{4} = \frac{1}{4}$
34.	$2\frac{3}{4} = \frac{1}{4}$
35.	$\frac{12}{3} + \frac{2}{3} = \frac{1}{3}$
36.	$4 + \frac{2}{3} = \frac{1}{3}$
37.	$4\frac{2}{3} = \frac{1}{3}$
38.	$3 + \frac{3}{5} = \frac{1}{5}$
39.	$3 + \frac{1}{2} = \frac{1}{2}$
40.	$4 + \frac{3}{4} = \frac{1}{4}$
41.	$2 + \frac{1}{6} = \frac{1}{6}$
42.	$2 + \frac{5}{8} = \frac{1}{8}$
43.	$2\frac{4}{5} = \frac{1}{5}$
44.	$3\frac{7}{8} = \frac{1}{8}$



Improvement: _____

B

1.	4 + 1 =
2.	$\frac{4}{4} + \frac{1}{4} = \frac{1}{4}$
3.	$1 + \frac{1}{4} = \frac{1}{4}$
4.	$1\frac{1}{4} = \frac{1}{4}$
5.	2 + 1 =
6.	$\frac{2}{2} + \frac{1}{2} = \frac{1}{2}$
7.	$1 + \frac{1}{2} = \frac{1}{2}$
8.	$1\frac{1}{2} = \frac{1}{2}$
9.	5 + 1 =
10.	$\frac{5}{5} + \frac{1}{5} = \frac{1}{5}$
11.	$1 + \frac{1}{5} = \frac{1}{5}$
12.	$1\frac{1}{5} = \frac{1}{5}$
13.	$\frac{3}{3} + \frac{1}{3} = \frac{1}{3}$
14.	$1 + \frac{1}{3} = \frac{1}{3}$
15.	$1\frac{1}{3} = \frac{1}{3}$
16.	$1\frac{2}{3} = \frac{1}{3}$
17.	$\frac{10}{10} + \frac{1}{10} = \frac{1}{10}$
18.	$1 + \frac{1}{10} = \frac{1}{10}$
19.	$1\frac{1}{10} = \frac{1}{10}$
20.	$1\frac{7}{10} = \frac{1}{10}$
21.	$\frac{8}{8} + \frac{5}{8} = \frac{1}{8}$
22.	$1 + \frac{5}{8} = \frac{1}{8}$

23.	$1\frac{5}{8} = \frac{1}{8}$
24.	$2 + \frac{1}{2} = 2\frac{1}{2}$
25.	$\frac{4}{2} + \frac{1}{2} = \frac{1}{2}$
26.	$2 + \frac{1}{2} = \frac{1}{2}$
27.	$2\frac{1}{2} = \frac{1}{2}$
28.	$2 + \frac{1}{4} = 2\frac{1}{4}$
29.	$\frac{8}{4} + \frac{1}{4} = \frac{1}{4}$
30.	$2 + \frac{1}{4} = \frac{1}{4}$
31.	$2\frac{1}{4} = \frac{1}{4}$
32.	$\frac{6}{3} + \frac{2}{3} = \frac{1}{3}$
33.	$2 + \frac{2}{3} = \frac{1}{3}$
34.	$2\frac{2}{3} = \frac{1}{3}$
35.	$\frac{12}{4} + \frac{3}{4} = \frac{1}{4}$
36.	$3 + \frac{3}{4} = \frac{1}{4}$
37.	$3\frac{3}{4} = \frac{1}{4}$
38.	$3 + \frac{4}{5} = \frac{1}{5}$
39.	$4 + \frac{1}{2} = \frac{1}{2}$
40.	$4 + \frac{2}{3} = \frac{1}{3}$
41.	$3 + \frac{1}{6} = \frac{1}{6}$
42.	$2 + \frac{7}{8} = \frac{1}{8}$
43.	$2\frac{3}{5} = \frac{1}{5}$
44.	$2\frac{7}{8} = \frac{1}{8}$



A

Change Mixed Numbers to Fractions

1.	2 + 1 =	
2.	$\frac{2}{2} + \frac{1}{2} = \frac{1}{2}$	
3.	$1 + \frac{1}{2} = \frac{1}{2}$	
4.	$1\frac{1}{2} = \frac{1}{2}$	
5.	4 + 1 =	
6.	$\frac{4}{4} + \frac{1}{4} = \frac{1}{4}$	
7.	$1 + \frac{1}{4} = \frac{1}{4}$	
8.	$1\frac{1}{4} = \frac{1}{4}$	
9.	3 + 1 =	
10.	$\frac{3}{3} + \frac{1}{3} = \frac{1}{3}$	
11.	$1 + \frac{1}{3} = \frac{1}{3}$	
12.	$1\frac{1}{3} = \frac{1}{3}$	
13.	$\frac{5}{5} + \frac{1}{5} = \frac{1}{5}$	
14.	$1 + \frac{1}{5} = \frac{1}{5}$	
15.	$1\frac{1}{5} = \frac{1}{5}$	
16.	$1\frac{2}{5} = \frac{1}{5}$	
17.	$1\frac{4}{5} = \frac{1}{5}$	
18.	$1\frac{3}{5} = \frac{1}{5}$	
19.	$\frac{4}{4} + \frac{3}{4} = \frac{1}{4}$	
20.	$1 + \frac{3}{4} = \frac{1}{4}$	
21.	$\frac{6}{6} + \frac{5}{6} = \frac{1}{6}$	
22.	$1 + \frac{5}{6} = \frac{1}{6}$	

23.	$1\frac{5}{6} = \frac{1}{6}$	
24.	$2 + \frac{1}{2} = 2\frac{1}{2}$	
25.	$\frac{4}{2} + \frac{1}{2} = \frac{1}{2}$	
26.	$2 + \frac{1}{2} = \frac{1}{2}$	
27.	$2\frac{1}{2} = \frac{1}{2}$	
28.	$2 + \frac{1}{4} = 2\frac{1}{4}$	
29.	$\frac{8}{4} + \frac{1}{4} = \frac{1}{4}$	
30.	$2 + \frac{1}{4} = \frac{1}{4}$	
31.	$2\frac{1}{4} = \frac{1}{4}$	
32.	$\frac{9}{3} + \frac{2}{3} = \frac{1}{3}$	
33.	$3 + \frac{2}{3} = \frac{1}{3}$	
34.	$3\frac{2}{3} = \frac{1}{3}$	
35.	$\frac{16}{4} + \frac{3}{4} = \frac{1}{4}$	
36.	$4 + \frac{3}{4} = \frac{1}{4}$	
37.	$4\frac{3}{4} = \frac{1}{4}$	
38.	$3 + \frac{2}{5} = \frac{1}{5}$	
39.	$4 + \frac{1}{2} = \frac{1}{2}$	
40.	$3 + \frac{3}{4} = \frac{1}{4}$	
41.	$3 + \frac{1}{6} = \frac{1}{6}$	
42.	$3 + \frac{5}{8} = \frac{1}{8}$	
43.	$3\frac{4}{5} = \frac{1}{5}$	
44.	$4\frac{7}{8} = \frac{1}{8}$	



Lesson 33: Subtract a mixed number from a mixed number.

Improvement: _____

B

Change Mixed Numbers to Fractions

1.	5 + 1 =	
2.	$\frac{5}{5} + \frac{1}{5} = \frac{1}{5}$	
3.	$1 + \frac{1}{5} = \frac{1}{5}$	
4.	$1\frac{1}{5} = \frac{1}{5}$	
5.	3 + 1 =	
6.	$\frac{3}{3} + \frac{1}{3} = \frac{1}{3}$	
7.	$1 + \frac{1}{3} = \frac{1}{3}$	
8.	$1\frac{1}{3} = \frac{1}{3}$	
9.	4 + 1 =	
10.	$\frac{4}{4} + \frac{1}{4} = \frac{1}{4}$	
11.	$1 + \frac{1}{4} = \frac{1}{4}$	
12.	$1\frac{1}{4} = \frac{1}{4}$	
13.	$\frac{10}{10} + \frac{1}{10} = \frac{1}{10}$	
14.	$1 + \frac{1}{10} = \frac{1}{10}$	
15.	$1\frac{1}{10} = \frac{1}{10}$	
16.	$1\frac{2}{10} = \frac{1}{10}$	
17.	$1\frac{4}{10} = \frac{1}{10}$	
18.	$1\frac{3}{10} = \frac{1}{10}$	
19.	$\frac{3}{3} + \frac{2}{3} = \frac{1}{3}$	
20.	$1 + \frac{2}{3} = \frac{1}{3}$	
21.	$\frac{8}{8} + \frac{7}{8} = \frac{1}{8}$	
22.	$1 + \frac{7}{8} = \frac{1}{8}$	

23.	$1\frac{7}{8} = \frac{1}{8}$
24.	$2 + \frac{1}{2} = 2\frac{1}{2}$
25.	$\frac{4}{2} + \frac{1}{2} = \frac{1}{2}$
26.	$2 + \frac{1}{2} = \frac{1}{2}$
27.	$2\frac{1}{2} = \frac{1}{2}$
28.	$2 + \frac{1}{3} = 2\frac{1}{3}$
29.	$\frac{6}{3} + \frac{1}{3} = \frac{1}{3}$
30.	$2 + \frac{1}{3} = \frac{1}{3}$
31.	$2\frac{1}{3} = \frac{1}{3}$
32.	$\frac{12}{4} + \frac{3}{4} = \frac{1}{4}$
33.	$3 + \frac{3}{4} = \frac{1}{4}$
34.	$3\frac{3}{4} = \frac{1}{4}$
35.	$\frac{12}{3} + \frac{2}{3} = \frac{1}{3}$
36.	$4 + \frac{2}{3} = \frac{1}{3}$
37.	$4\frac{2}{3} = \frac{1}{3}$
38.	$3 + \frac{3}{5} = \frac{1}{5}$
39.	$5 + \frac{1}{2} = \frac{1}{2}$
40.	$3 + \frac{2}{3} = \frac{1}{3}$
41.	$3 + \frac{1}{8} = \frac{1}{8}$
42.	$3 + \frac{1}{6} = \frac{1}{6}$
43.	$3\frac{2}{5} = \frac{1}{5}$
44.	$4\frac{5}{6} = \frac{1}{6}$



Lesson 33: Subtract a mixed number from a mixed number.

A

Change Mixed Numbers to Fractions

1.	4 = 3 +
2.	$\frac{4}{3} = \frac{3}{3} + \frac{1}{3}$
3.	$\frac{4}{3} = 1 + \frac{1}{3}$
4.	$\frac{4}{3} = 1 \frac{1}{3}$
5.	6 = 5 +
6.	$\frac{6}{5} = \frac{5}{5} + \frac{1}{5}$
7.	$\frac{6}{5} = 1 + \frac{1}{5}$
8.	$\frac{6}{5} = 1 \frac{1}{5}$
9.	5 = + 1
10.	$\frac{5}{4} = \frac{1}{4} + \frac{1}{4}$
11.	$\frac{5}{4} = 1 + \frac{1}{4}$
12.	$\frac{5}{4} = \underline{\qquad} \frac{1}{4}$
13.	8 = + 3
14.	$\frac{8}{5} = \frac{1}{5} + \frac{3}{5}$
15.	$\frac{8}{5} = 1 + \frac{1}{5}$
16.	$\frac{8}{5} = 1 \frac{1}{5}$
17.	$\frac{7}{5} = 1 \frac{1}{5}$
18.	$\frac{6}{5} = 1 \frac{1}{5}$
19.	$\frac{9}{5} = 1 \frac{1}{5}$
20.	$\frac{10}{5} =$
21.	$\frac{1}{5} = \frac{10}{5} + \frac{4}{5}$
22.	$\frac{1}{5} = 2 + \frac{4}{5}$

23.	$\frac{8}{4} =$
24.	$\frac{1}{4} = \frac{8}{4} + \frac{3}{4}$
25.	$\frac{11}{4} = \frac{8}{4} + \frac{1}{4}$
26.	$\frac{11}{4} = 2 + \frac{1}{4}$
27.	$\frac{11}{4} = 2\frac{1}{4}$
28.	$\frac{1}{3} = \frac{6}{3} + \frac{1}{3}$
29.	$\frac{1}{3} = 2 + \frac{1}{3}$
30.	$\frac{7}{3} = \frac{1}{3}$
31.	$\frac{8}{3} = \frac{2}{3}$
32.	$\frac{17}{5} = \frac{1}{5} + \frac{2}{5}$
33.	$\frac{17}{5} = \frac{15}{5} + \frac{15}{5}$ $\frac{17}{5} = - + \frac{2}{5}$
34.	$\frac{17}{5} =+ \frac{2}{5}$
35.	$\frac{17}{5} = \frac{2}{5}$
36.	$\frac{13}{6} = \frac{12}{6} + \frac{12}{6}$
37.	$\frac{13}{6} =+ \frac{1}{6}$
38.	$\frac{13}{6} = 2\frac{1}{6}$
39.	$\frac{17}{6} = 2\frac{1}{6}$
40.	$\frac{9}{8} = 1 + \frac{1}{8}$
41.	$\frac{13}{8} = 1 + \frac{1}{8}$
42.	$\frac{19}{10} = 1 + \frac{10}{10}$
43.	$\frac{19}{12} = \frac{1}{12} + \frac{7}{12}$
44.	$\frac{11}{6} = 1 + \frac{1}{6}$



Improvement: _____

B

Change Mixed Numbers to Fractions

1.	5 = 4 +	
2.	$\frac{5}{4} = \frac{4}{4} + \frac{1}{4}$	
3.	$\frac{5}{4} = 1 + \frac{1}{4}$	
4.	$\frac{5}{4} = 1\frac{1}{4}$	
5.	3 = 2 +	
6.	$\frac{3}{2} = \frac{2}{2} + \frac{1}{2}$	
7.	$\frac{3}{2} = 1 + \frac{1}{2}$	
8.	$\frac{3}{2} = 1\frac{1}{2}$	
9.	9 =+ 1	
10.	$\frac{9}{8} = \frac{1}{8} + \frac{1}{8}$	
11.	$\frac{9}{8} = 1 + \frac{1}{8}$	
12.	$\frac{9}{8} =\frac{1}{8}$	
13.	9 = + 4	
14.	$\frac{9}{5} = \frac{1}{5} + \frac{4}{5}$	
15.	$\frac{9}{5} = 1 + \frac{1}{5}$	
16.	$\frac{9}{5} = 1{5}$	
17.	$\frac{8}{5} = 1{5}$	
18.	$\frac{7}{5} = 1 \frac{1}{5}$	
19.	$\frac{6}{5} = 1 \frac{1}{5}$	
20.	$\frac{8}{4} =$	
21.	$\frac{1}{4} = \frac{8}{4} + \frac{1}{4}$	
22.	$\frac{1}{4} = 2 + \frac{1}{4}$	

23.	$\frac{6}{3} =$
24.	$\frac{1}{3} = \frac{6}{3} + \frac{2}{3}$
25.	$\frac{8}{3} = \frac{6}{3} + \frac{1}{3}$
26.	$\frac{8}{3} = 2 + \frac{1}{3}$
27.	$\frac{8}{3} = 2\frac{1}{3}$
28.	$\frac{1}{10} = \frac{20}{10} + \frac{1}{10}$
29.	$\frac{1}{10} = 2 + \frac{1}{10}$
30.	$\frac{21}{10} = \frac{1}{10}$
31.	$\frac{27}{10} = \frac{7}{10}$
32.	$\frac{13}{6} = \frac{1}{6} + \frac{1}{6}$
33.	$\frac{13}{6} = \frac{12}{6} + \frac{1}{6}$
34.	$\frac{13}{6} =+ \frac{1}{6}$
35.	$\frac{13}{6} =\frac{1}{6}$
36.	$\frac{17}{8} = \frac{16}{8} + \frac{16}{8}$
37.	$\frac{17}{8} = \frac{1}{8} + \frac{1}{8}$
38.	$\frac{17}{8} = 2\frac{1}{8}$
39.	$\frac{21}{8} = 2{8}$
40.	$\frac{7}{6} = 1 + \frac{1}{6}$
41.	$\frac{11}{6} = 1 + \frac{1}{6}$
42.	$\frac{13}{5} = 2 + \frac{1}{5}$
43.	$\frac{17}{12} = \frac{1}{12} + \frac{5}{12}$
44.	$\frac{13}{8} = 1 + \frac{1}{8}$



Number Correct:

A

Multiply Whole Numbers Times Fractions

1.	$\frac{1}{3} + \frac{1}{3} =$	
2.	$2 \times \frac{1}{3} =$	
3.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
4.	$3 \times \frac{1}{4} =$	
5.	$\frac{1}{5} + \frac{1}{5} =$	
6.	$2 \times \frac{1}{5} =$	
7.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
8.	$3 \times \frac{1}{5} =$	
9.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
10.	$4 \times \frac{1}{5} =$	
11.	$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} =$	
12.	$3 \times \frac{1}{10} =$	
13.	$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$	
14.	$3 \times \frac{1}{8} =$	
15.	$\frac{1}{2} + \frac{1}{2} =$	
16.	$2 \times \frac{1}{2} =$	
17.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
18.	$3 \times \frac{1}{3} =$	
19.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
20.	$4 \times \frac{1}{4} =$	
21.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	
22.	$3 \times \frac{1}{2} =$	

23.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
24.	$4 \times \frac{1}{3} =$	
25.	$\frac{5}{6} =$	$ \times \frac{1}{6}$
26.	$\frac{5}{6} =$	5 × —
27.	$\frac{5}{8} =$	5 × —
28.	$\frac{5}{8} =$	$\times\frac{1}{8}$
29.	$\frac{7}{8} =$	7 × —
30.	$\frac{7}{10} =$	7 × —
31.	$\frac{7}{8} =$	$\times \frac{1}{8}$
32.	$\frac{7}{10} =$	$ \times \frac{1}{10}$
33.	$\frac{6}{6} =$	6 × —
34.	1 =	6 × —
35.	$\frac{8}{8} =$	$\times\frac{1}{8}$
36.	1 =	$\times\frac{1}{8}$
37.	$9 \times \frac{1}{10} =$	
38.	$7 \times \frac{1}{5} =$	
39.	1 =	3 × —
40.	$7 \times \frac{1}{12} =$	
41.	1 =	$\times\frac{1}{5}$
42.	$\frac{3}{5} =$	$\frac{1}{5} + \frac{1}{5} +$
43.	$3 \times \frac{1}{4} =$	$-+\frac{1}{4}+\frac{1}{4}$
44.	1 =	<u> </u>



Improvement:

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Multiply Whole Numbers Times Fractions

1.	$\frac{1}{5} + \frac{1}{5} =$	
2.	$2 \times \frac{1}{5} =$	
3.	$\frac{1}{3} + \frac{1}{3} =$	
4.	$2 \times \frac{1}{3} =$	
5.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
6.	$3 \times \frac{1}{4} =$	
7.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
8.	$3 \times \frac{1}{5} =$	
9.	$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$	
10.	$4 \times \frac{1}{5} =$	
11.	$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$	
12.	$3 \times \frac{1}{8} =$	
13.	$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} =$	
14.	$3 \times \frac{1}{10} =$	
15.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
16.	$3 \times \frac{1}{3} =$	
17.	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$	
18.	$4 \times \frac{1}{4} =$	
19.	$\frac{1}{2} + \frac{1}{2} =$	
20.	$2 \times \frac{1}{2} =$	
21.	$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} =$	
22.	$4 \times \frac{1}{3} =$	

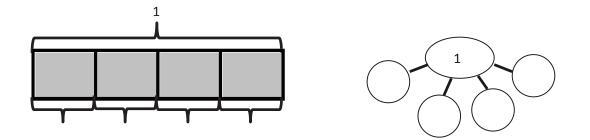
23.	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$	
24.	$3 \times \frac{1}{2} =$	
25.	$\frac{5}{6} = \frac{5}{6} =$	$$ × $\frac{1}{6}$
26.	$\frac{5}{6} =$	5 × —
27.	$\frac{5}{8} =$	5 × —
28.	$\frac{5}{8} =$	$\times\frac{1}{8}$
29.	$\frac{7}{8} =$	7 × —
30.	$\frac{7}{10} =$	7 × —
31.	$\frac{7}{8} =$	$\times\frac{1}{8}$
32.	$\frac{7}{10} =$	
33.	$\frac{8}{8} =$	8 × —
34.	1 =	8 × —
35.	$\frac{6}{6} =$	$ \times \frac{1}{6}$
36.	1 =	$ \times \frac{1}{6}$
37.	$5 \times \frac{1}{12} =$	
38.	$6 \times \frac{1}{5} =$	
39.	1 =	4 × —
40.	$9 \times \frac{1}{10} =$	
41.	1 =	$\times\frac{1}{3}$
42.	$\frac{3}{4} =$	$\frac{1}{4} + \frac{1}{4} +$
43.	$3 \times \frac{1}{5} =$	$\frac{4}{-} + \frac{1}{5} + \frac{1}{5}$
44.	1 =	<u> + + + </u> +





Date _____

1. Complete the number bond, and write the number sentence to match the tape diagram.



- 2. Draw and label tape diagrams to model each number sentence.
 - a. $1 = \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

b. $\frac{5}{6} = \frac{2}{6} + \frac{2}{6} + \frac{1}{6}$



Date _____

Step 1: Draw and shade a tape diagram of the given fraction.

Step 2: Record the decomposition of the fraction in three different ways using number sentences.

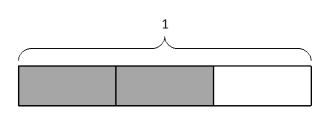
 $\frac{4}{7}$



a.

 Name
 Date

1. Decompose each fraction modeled by a tape diagram as a sum of unit fractions. Write the equivalent multiplication sentence.



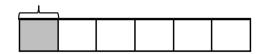
b. 1

- 2. Draw a tape diagram, and record the given fraction's decomposition into unit fractions as a multiplication sentence.
 - 6 9



Date _____

1. The total length of the tape diagram represents 1. Decompose the shaded unit fraction as the sum of smaller unit fractions in at least two different ways.



h		

2. Draw a tape diagram to prove the following statement.

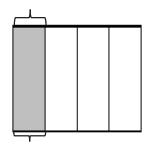
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$$\frac{2}{3} = \frac{4}{6}$$

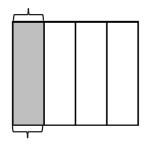


Date _____

- 1. Draw horizontal lines to decompose each rectangle into the number of rows as indicated. Use the model to give the shaded area as both a sum of unit fractions and as a multiplication sentence.
 - a. 2 rows



b. 3 rows



- 2. Draw an area model to show the decomposition represented by the number sentence below. Represent the decomposition as a sum of unit fractions and as a multiplication sentence.
 - $\frac{3}{5} = \frac{6}{10}$

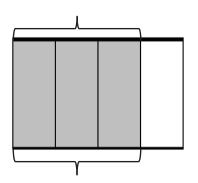


A STORY OF UNITS

Name _____

Date _____

1. The rectangle below represents 1. Draw horizontal lines to decompose the rectangle into eighths. Use the model to give the shaded area as a sum and as a product of unit fractions. Use parentheses to show the relationship between the number sentences.



2. Draw an area model to show the decomposition represented by the number sentence below.

$$\frac{4}{5} = \frac{8}{10}$$

Date _____

Draw two different area models to represent 1 fourth by shading. Decompose the shaded fraction into (a) eighths and (b) twelfths. Use multiplication to show how each fraction is equivalent to 1 fourth.

a.





Date _____

- 1. Use multiplication to create an equivalent fraction for the fraction below.
 - 2 5

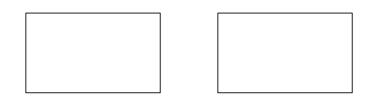
2. Determine if the following is a true number sentence. If needed, correct the statement by changing the right-hand side of the number sentence.

$$\frac{3}{4} = \frac{9}{8}$$



Date _____

a. In the first area model, show 2 sixths. In the second area model, show 4 twelfths. Show how both fractions can be composed, or renamed, as the same unit fraction.



b. Express the equivalent fractions in a number sentence using division.



Date _____

Draw an area model to show why the fractions are equivalent. Show the equivalence in a number sentence using division.

 $\frac{4}{10} = \frac{2}{5}$



Name	Date	

1. Partition a number line from 0 to 1 into sixths. Decompose $\frac{2}{6}$ into 4 equal lengths.

2. Write a number sentence using multiplication to show what fraction represented on the number line is equivalent to $\frac{2}{6}$.

3. Write a number sentence using division to show what fraction represented on the number line is equivalent to $\frac{2}{6}$.



Name _____ Date _____ 1. Plot the following points on the number line without measuring. a. $\frac{8}{10}$ b. $\frac{3}{5}$ c. $\frac{1}{4}$ 0 $\frac{1}{2}$ 1 $\begin{pmatrix} 1 \\ 1 \\ 1 \\ 1 \end{pmatrix}$

2. Use the number line in Problem 1 to compare the fractions by writing >, <, or = on the lines.

a.	$\frac{1}{4}$	$-\frac{1}{2}$
	т	4

b. $\frac{8}{10}$ _____ $\frac{3}{5}$







Name _____ Date _____ 1. Place the following fractions on the number line given. a. $\frac{5}{4}$ b. $\frac{10}{7}$ c. $\frac{16}{9}$ 1 $1\frac{1}{2}$ 21 $1\frac{1}{2}$ 2

2. Compare the fractions using >, <, or =.

a.	5	10		5	16		16	10
	4	7		4	9		9	7

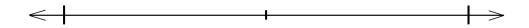


	A STORY OF UNITS	Lesson 14 Exit Ticket	4•5
Name		Date	
1.	Draw tape diagrams to compare the following fractions:		

 $\frac{2}{5}$ ---- $\frac{3}{10}$

2. Use a number line to compare the following fractions:







Date _____

Draw an area model for each pair of fractions, and use it to compare the two fractions by writing >, <, or = on the line.

1. $\frac{3}{4} - \frac{4}{5}$





Date _____

- 1. Solve. Use a number bond to decompose the difference. Record your final answer as a mixed number.
 - $\frac{16}{9} \frac{5}{9}$

2. Solve. Use a number bond to decompose the sum. Record your final answer as a mixed number.

 $\frac{5}{12} + \frac{10}{12}$



Date _____

1. Solve. Model the problem with a number line, and solve by both counting up and subtracting.

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

- 2. Find the difference in two ways. Use a number bond to show the decomposition.
 - $1\frac{2}{7} \frac{5}{7}$



Date _____

Solve the following problems. Use number bonds to help you.

1. $\frac{5}{9} + \frac{2}{9} + \frac{4}{9}$

2. $1 - \frac{5}{8} - \frac{1}{8}$



Use the RDW process to solve.

1. Mrs. Smith took her bird to the vet. Tweety weighed $1\frac{3}{10}$ pounds. The vet said that Tweety weighed $\frac{4}{10}$ pound more last year. How much did Tweety weigh last year?

2. Hudson picked $1\frac{1}{4}$ baskets of apples. Suzy picked 2 baskets of apples. How many more baskets of apples did Suzy pick than Hudson?



Date _____

1. Draw a number line to model the addition. Solve, and then write a complete number sentence.

 $\frac{5}{8} + \frac{2}{4}$

2. Solve without drawing a model.

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



Date _____

Solve. Write a complete number sentence. Use a number bond to write each sum as a mixed number. Use a model if needed.

1. $\frac{1}{4} + \frac{7}{8}$

2.
$$\frac{2}{3} + \frac{7}{12}$$



Lesson 21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12.

Date _____

Complete the subtraction sentences using number bonds. Draw a model if needed.

1. $6 - \frac{1}{5} =$ _____

2.
$$8 - \frac{5}{6} =$$

3.
$$7 - \frac{5}{8} =$$



Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models.

Date _____

Multiply and write the product as a mixed number. Draw a number line to support your answer.

1. $8 \times \frac{1}{2}$

2. 7 copies of 1 fourth

3. $13 \times \frac{1}{3}$



Date _____

1. Rename the fraction as a mixed number by decomposing it into two parts. Model the decomposition with a number line and a number bond.

 $\frac{17}{5}$

2. Convert the fraction to a mixed number. Model with a number line.

19 3

- 3. Convert the fraction to a mixed number.
 - $\frac{11}{4}$



Date _____

Convert each mixed number to a fraction greater than 1.

1. $3\frac{1}{5}$

2. $2\frac{3}{5}$

3. $4\frac{2}{9}$



Date _____

Compare the fractions given below by writing >, <, or =.

Give a brief explanation for each answer, referring to benchmark fractions.

1. $3\frac{2}{3}$ _____ $3\frac{4}{6}$









Date _____

Compare each pair of fractions using >, <, or = using any strategy.

1. $4\frac{3}{8}$ _____ $4\frac{1}{4}$





4. $10\frac{2}{5}$ _____ $10\frac{3}{4}$



Lesson 27: Compare fractions greater than 1 by creating common numerators or denominators.

Student

Robin

Bill

Katrina

Kelly

Mary

Gail

Scott

Ben

Length of time

(in hours)

1

2

1

3 4

 $1\frac{3}{4}$

 $1\frac{1}{2}$

 $2\frac{1}{4}$

 $1\frac{3}{4}$

 $2\frac{2}{4}$

Name	Date

Mr. O'Neil asked his students to record the length of time they read over the weekend. The times are listed in the table.

1. At the bottom of the page, make a line plot of the data.

2. One of the students read $\frac{3}{4}$ hour on Friday, $\frac{3}{4}$ hour on Saturday, and $\frac{3}{4}$ hour on Sunday. How many hours did that student read over the weekend? Name that student.

EUREKA
MATH

Date _____

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

1. $2\frac{9}{10} + 2\frac{1}{4} \approx$ _____

2. $11\frac{8}{9} - 3\frac{3}{8} \approx$ _____



A STORY OF UNITS

Name _____ Date _____ Solve.

1. $3\frac{2}{5} + _= 4$

2. $2\frac{3}{8} + \frac{7}{8}$



Name	Date
Solve.	
1. $2\frac{3}{8} + 1\frac{5}{8}$	

2. $3\frac{4}{5} + 2\frac{3}{5}$



Name	Date	
Solve.		
1. $10\frac{5}{6}-\frac{4}{6}$		

2. $8\frac{3}{8} - \frac{6}{8}$



Date _____

Solve using any strategy.

1. $4\frac{2}{3} - 2\frac{1}{3}$

2. $12\frac{5}{8} - 8\frac{7}{8}$



Name	Date
Solve.	
1. $7\frac{1}{6} - 2\frac{4}{6}$	

2. $12\frac{5}{8} - 3\frac{7}{8}$



Date _____

1. Solve using unit form.

 $5 \times \frac{2}{3}$

2. Solve.

 $11 \times \frac{5}{6}$



Lesson 35: Represent the multiplication of *n* times a/b as $(n \times a)/b$ using the associative property and visual models.

Date _____

Solve using any method.

1. 7 × $\frac{3}{4}$

2. 9 × $\frac{2}{5}$

3. $60 \times \frac{5}{8}$



Lesson 36: Represent the multiplication of *n* times a/b as $(n \times a)/b$ using the associative property and visual models.

Date _____

Multiply. Write each product as a mixed number.

1. $4 \times 5\frac{3}{8}$

2. $4\frac{3}{10} \times 3$



Lesson 37: Find the product of a whole number and a mixed number using the distributive property.

Date _____

1. Fill in the unknown factors.

 $8 \times 5\frac{2}{3} = (\underline{} \times 5) + (\underline{} \times \frac{2}{3})$

2. Multiply. Use the distributive property.

$$6\frac{5}{8} \times 7$$



Date _____

Use the RDW process to solve.

Jeff has ten packages that he wants to mail.	Nine identica	al packages weigh 2	$\frac{7}{8}$ pounds each.	A tenth package
weighs two times as much as one of the othe	er packages.	How many pounds	do all ten packa	ges weigh?



Name

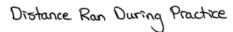
Date _____

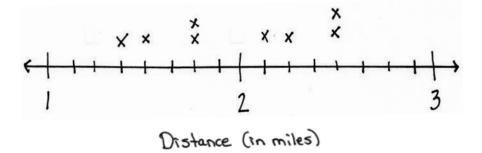
X=1 team member

Coach Taylor asked his team to record the distance they ran during practice. The distances are listed in the table.

 Use the table to locate the incorrect data on the line plot. Circle any incorrect points.

Mark any missing points.





Team Members	Distance (in miles)
Alec	$1\frac{3}{4}$
Henry	$1\frac{1}{2}$
Charles	$2\frac{1}{8}$
Steve	$1\frac{3}{4}$
Pitch	$2\frac{2}{4}$
Raj	$1\frac{6}{8}$
Pam	$2\frac{1}{2}$
Tony	$1\frac{3}{8}$

2. Of the team members who ran $1\frac{6}{8}$ miles, how many miles did those team members run combined?

Find the sums.

1. $\frac{0}{20} + \frac{1}{20} + \frac{2}{20} + \dots + \frac{20}{20}$ 2. $\frac{0}{200} + \frac{1}{200} + \frac{2}{200} + \dots + \frac{200}{200}$



Assessment Packet

- 1. Let each small square represent $\frac{1}{4}$.
 - a. Using the same unit, draw and shade the following fractions. Represent each as a sum of unit fractions.

Example: $\frac{3}{4}$	i. 1	ii. $\frac{2}{4}$	iii. $\frac{5}{4}$
$\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$			

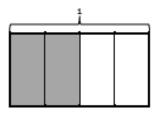
- b. Record the decompositions of Parts (i) and (iii) using only 2 addends.
 - i.

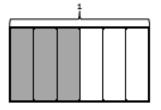
 - iii.
- c. Rewrite the equations from Part (a) as the multiplication of a whole number by a unit fraction.
 - i.
 - ii.

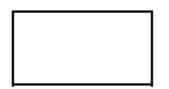
iii.



- a. Using the fractional units shown, identify the fraction of the rectangle that is shaded. Continue this pattern by drawing the next area model in the sequence and identifying the fraction shaded.
 - 1







3. Cross out the fraction that is not equivalent to the other three. Show how you know.

3 60 6	6 6	6 3 12 8 6	1	16	9	3			
a.	5	100	10	5	D. $\frac{-}{4}$ $\frac{-}{2}$ $\frac{-}{8}$ $\frac{-}{4}$ C. $\frac{-}{4}$		12		
		200		0		-		•	-



4. Fill in the circle with <, =, or > to make a true number sentence. Justify each response by drawing a model (such as an area model or a number line), creating common denominators or numerators, or explaining a comparison to a benchmark fraction.

a.
$$\frac{6}{5}$$
 $\frac{4}{5}$ b. $\frac{5}{8}$ $\frac{5}{10}$

c.
$$\frac{5}{5}$$
 $\bigcirc \frac{12}{12}$ d. $\frac{5}{12}$ $\bigcirc \frac{6}{10}$

e.
$$\frac{5}{6}$$
 $\bigcirc \frac{3}{4}$ f. $\frac{8}{3}$ $\bigcirc \frac{16}{6}$

g.
$$\frac{7}{4}$$
 $\bigcirc \frac{9}{5}$ h. $\frac{12}{8}$ $\bigcirc \frac{11}{6}$



5. Fill in the blanks to make each number sentence true. Draw a number line, a tape diagram, or an area model to represent each problem.

a $-\frac{1}{12} + \frac{1}{12}$	u 1	2 ' 12	12	b.	$\frac{53}{100}$ –	27 100	=
----------------------------------	-----	--------	----	----	--------------------	-----------	---

c.
$$\frac{8}{12}$$
 + ____ = 1 d. $\frac{3}{10}$ + $\frac{6}{10}$ + $\frac{2}{10}$ = _____





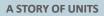
- 6. Ray, Robin, and Freddy went fishing.
 - a. They spent $\frac{1}{6}$ of their money on water, $\frac{4}{6}$ of their money on lunch, and the rest on worms. What fraction of their money was spent on worms? Draw a model, and write an equation to solve.

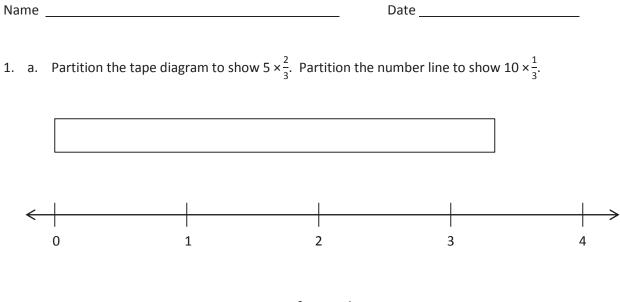
b. Robin noticed her water bottle was $\frac{1}{2}$ full and Freddy's was $\frac{3}{4}$ full. Robin said, "My $\frac{1}{2}$ full bottle has more water than your $\frac{3}{4}$ full bottle." Explain how $\frac{1}{2}$ bottle could be more than $\frac{3}{4}$ bottle.

- c. Ray, Robin, and Freddy each had identical containers of worms. Ray used $\frac{3}{8}$ container. Robin used $\frac{6}{8}$ container, and Freddy used $\frac{7}{8}$ container. How many total containers of worms did they use?
- d. Express the number of remaining containers as a product of a whole number and a unit fraction.

e. Six out of the eight fish they caught were trout. What is another fraction equal to 6 eighths? Write a number sentence, and draw a model to show the two fractions are equal.







b. Use the models above to explain why $5 \times \frac{2}{3} = 10 \times \frac{1}{3}$.

- 2. Fill in the circles below with <, =, or > to make true number sentences. Use decomposition or multiplication to justify your answer.
 - a. 7 $\frac{43}{6}$

b.
$$11\frac{1}{3}$$
 $\frac{34}{3}$

$$\mathsf{c.} \quad \frac{13}{6} \bigcirc \frac{38}{12}$$



3. Generate a pattern of at least 13 fractions by adding $\frac{4}{3}$ to $\frac{1}{3}$ and then continuing to add $\frac{4}{3}$ to each fraction. Circle each fraction equal to a whole number. Write what you notice about the pattern of whole numbers. The first two fractions are written for you.

 $\frac{1}{3}$, $\frac{5}{3}$,

4. Find each sum or difference.

a.
$$6\frac{4}{10} + 7\frac{7}{10}$$
 b. $3\frac{3}{8} + 6\frac{5}{8} + 1\frac{7}{8}$

c.
$$1\frac{9}{12} - 1\frac{4}{12}$$
 d. $5\frac{2}{5} - 1\frac{3}{5}$



5. a. Rewrite $3 \times \frac{6}{8}$ as the product of a unit fraction and a whole number. Solve.

b. Rewrite $4 \times 6\frac{2}{3}$ as the product of a unit fraction and a whole number. Solve.

6. Determine if the following are true or false. Explain how you know using models or words. Make false problems true by rewriting the right side of the number sentence.

a.
$$7\frac{1}{3} = 7 + \frac{1}{3}$$
 b. $\frac{5}{3} = \frac{3}{3} + \frac{2}{3}$

C.
$$\frac{13}{6} - \frac{5}{6} = \frac{13-5}{6}$$
 d. $\frac{11}{3} = 11 + \frac{1}{3}$

e.
$$\frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} = 4 \times \frac{7}{8}$$

f. $5 \times 3\frac{3}{4} = 15 + \frac{3}{4}$



- 7. The chart to the right shows data Amashi collected about butterfly wingspans.
 - a. At the bottom of this page, create a line plot to display the data in the table.
 - b. What is the difference in wingspan between the widest and narrowest butterflies on the chart?

c. Three butterflies have the same wingspan. Explain how you know the measurements are equal.

Butterfly	Wingspan (inches)		
Monarch	$3\frac{7}{8}$		
Milbert's Tortoiseshell	$2\frac{5}{8}$		
Zebra Swallowtail	$2\frac{1}{2}$		
Viceroy	$2\frac{6}{8}$		
Postman	$3\frac{3}{8}$		
Purple Spotted Swallowtail	$2\frac{2}{8}$		
Julia	$3\frac{2}{4}$		
Southern Dogface	$2\frac{3}{8}$		
Tiger Swallowtail	$3\frac{1}{2}$		
Regal Fritillary	$3\frac{4}{8}$		



Solve each problem. Draw a model, write an equation, and write a statement for each.

d. Amashi wants to display a Postman and Viceroy side by side in a photo box with a width of 6 inches. Will these two butterflies fit? Explain how you know.

e. Compare the wingspan of the Milbert's Tortoiseshell and the Zebra Swallowtail using >, <, or =.

f. The Queen Alexandra Birdwing can have a wingspan that is 5 times as wide as the Southern Dogface's. How many inches can the Birdwing's wingspan be?

g. Amashi discovered a pattern. She started with $2\frac{2}{8}$ inches and added $\frac{1}{8}$ inch to each measurement. List the next four measurements in her pattern. Name the five butterflies whose wingspans match the measurements in her pattern.

