Study Link 8.1

(1) $\frac{3}{8} \times \frac{3}{3} = \frac{9}{24} < \frac{3}{6} \times \frac{4}{4} = \frac{12}{24}$ (2) $\frac{2}{3} \times \frac{3}{3} = \frac{6}{9} > \frac{2}{9}$

(3) $\frac{4}{7} \times \frac{6}{6} = \frac{24}{42} < \frac{5}{6} \times \frac{7}{7} = \frac{35}{42}$ (4) $\frac{19}{20} \times \frac{2}{2} = \frac{38}{40} > \frac{4}{8} \times \frac{5}{5} = \frac{20}{40}$

(5) $\frac{11}{21} \times \frac{17}{17} = \frac{187}{357} < \frac{9}{17} \times \frac{21}{21} = \frac{189}{357}$ (6) $\frac{4}{7} \times \frac{11}{11} = \frac{44}{77} > \frac{6}{11} \times \frac{7}{7} = \frac{42}{77}$

(7) Explanation in work shown

(8) $\frac{3}{4} = 0.75$ (9) $\frac{2}{3} = 0.\overline{6}$ (10) $\frac{5}{8} = 0.625$

(11) $\frac{7}{10} = 0.7$ (12) $\frac{11}{20} = .055$ (13) $\frac{21}{25} = 0.84$

Remember the fraction line means divide
Also you can make the fractions 10^{ths}, 100^{ths} & $1{,}000^{ths}$ to help change to a decimal.

(14)
$$\begin{array}{r} .625 \\ 8\overline{)5.000} \\ -48\downarrow \\ \hline 20 \\ -16\downarrow \\ \hline 40 \\ 40 \end{array}$$

(15) $\frac{1}{2} \times \frac{4}{4} = \frac{4}{8} + \frac{5}{8} = \frac{9}{8} > 1$

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

(17) $\frac{7}{9} \times \frac{5}{5} = \frac{35}{45}$ $\frac{3}{5} \times \frac{9}{9} = \frac{27}{45}$

$\frac{35}{45} + \frac{27}{45} = \frac{62}{45} > 1$

(18) $\frac{1}{2} > \frac{6 \times 2}{10 \times 2} = \frac{12}{20} + \frac{5}{20} = \frac{17}{20}$

(19) $\frac{1}{2} > \frac{3 \times 9}{8 \times 9} = \frac{27}{72}$ $\frac{1 \times 9}{8 \times 9} = \frac{9}{72}$

$\frac{27}{72} + \frac{9}{72} = \frac{36}{72}$

(20) $\frac{1}{2} > \frac{6 \times 8}{7 \times 8} = \frac{48}{56}$ $\frac{1 \times 7}{8 \times 7} = \frac{7}{56}$ $\frac{48}{56} + \frac{7}{56} = \frac{55}{56}$

(21)

Practice 3.7

(22) $675 \times 42 = 1350 + 27000 = 28350$ or

	6	7	5	
2	12	14	10	4
8	6	7	5	2
	3	5	0	

(23) $675 \overline{)28350}$ 42

-2700

1350

-1350

(24) $67.50 - 0.42 = 67.08$

(25) $28,350 + 42 + 67.08 = 28,459.08$

Study Link 8.2

(1) $3\frac{6}{5} = 1\frac{1}{5} + 3 = 4\frac{1}{5}$ (2) $\frac{16}{8} = 2$

(3) $9\frac{5}{3} = 1\frac{2}{3} + 9 = 10\frac{2}{3}$ (4) $1\frac{7}{5} = 1\frac{2}{5} + 1 = 2\frac{2}{5}$

(5) $4\frac{6}{4} = 1\frac{2}{4} + 5 = 6\frac{2}{4} = \frac{1}{2}$ (6) $5\frac{10}{6} = 1\frac{4}{6} + 5 = 6\frac{4}{6} = \frac{2}{3}$

(7) $3\frac{1}{4} + 2\frac{3}{4} = 5\frac{4}{4} = 6$ (8) $4\frac{1}{5} + 3\frac{4}{5} = 7\frac{5}{5} = 8$

(9) $9\frac{1}{3} + 4\frac{2}{3} = 13\frac{3}{3} = 14$ (10) $3\frac{5}{7} + 8\frac{6}{7} = 11\frac{11}{7} =$
$1\frac{4}{7} + 11 = 12\frac{4}{7}$

(11) $\frac{15}{8} + 3\frac{3}{8} =$ take the bottom times the whole add the top $\frac{27}{8} + \frac{15}{8} = \frac{42}{8} =$
$5\frac{2}{8} = \frac{1}{4}$

(12) $4\frac{2}{9} + 5\frac{5}{9} = 9\frac{7}{9}$

(13) $2\frac{5}{8}$
$+ 6\frac{3}{4} = \frac{6}{8}$
$8\frac{11}{8} = 1\frac{3}{8} + 8 = 9\frac{3}{8}$

(14) $7\frac{1}{2} = \frac{3}{6}$
$+ 3\frac{2}{3} \quad \frac{4}{6}$
$10\frac{7}{6} = 1\frac{1}{6} + 10 = 11\frac{1}{6}$

(15) $4\frac{6}{9}\ \frac{24}{36}$

$+\ 3\frac{7}{12}\ \frac{21}{36}$

$7\left(\frac{45}{36}\right) = 1\frac{9}{36} = 1\frac{1}{4} = 8\frac{1}{4}$

(16) $5\frac{3}{4} = \frac{15}{20}$

$2\frac{4}{5} = \frac{16}{20}$

$7\left(\frac{31}{20}\right) = 1\frac{11}{20} = 8\frac{11}{20}$

Practice

(17)
$$\begin{array}{r} 590 \\ 6\overline{)3,540} \\ -30\downarrow \\ \hline 54 \\ -54 \\ \hline 00 \\ -0 \\ \hline \end{array}$$

(18)
$$\begin{array}{r} 590 \\ 3\overline{)1770} \\ -15\downarrow \\ \hline 27 \\ 27 \\ \hline 00 \\ -0 \\ \hline 0 \end{array}$$

(19)

$$
\begin{array}{r}
590 \\
12\overline{)7080} \\
-60 \\
\hline
108 \\
-108 \\
\hline
00 \\
-0 \\
\hline
\end{array}
$$

(20)

$$
\begin{array}{r}
^{4}590 \\
\times\ \ 5 \\
\hline
2950
\end{array}
$$

$$
\begin{array}{r}
1475 \\
2\overline{)2950} \\
-2\downarrow \\
\hline
09 \\
-8\downarrow \\
\hline
15 \\
-14\downarrow \\
\hline
10 \\
-10 \\
\hline
\end{array}
$$

Study Link 8 3

① $3\frac{3}{8} = 2\frac{11}{8}$ $\quad 2 + \frac{8}{8} + \frac{3}{8} = 2\frac{11}{8}$

② $4\frac{5}{6} = 3\frac{11}{6}$ ③ $2\frac{1}{9} = 1\frac{10}{9}$

④ $6\frac{3}{7} = 5\frac{10}{7}$ ⑤ $4\frac{3}{5} = 3\frac{8}{5}$

⑥ $7\frac{2}{3} = 6\frac{5}{3}$

⑦
$$\begin{array}{r} 5\frac{3}{4} \\ -\,3\frac{1}{4} \\ \hline 2\frac{2}{4} = \frac{1}{2} \end{array}$$

⑧
$$\begin{array}{r} 6\frac{2}{3} = \frac{8}{12} \\ -\,4\frac{1}{4} = \frac{3}{12} \\ \hline 2\frac{5}{12} \end{array}$$

⑨
$$\begin{array}{r} 5\frac{4}{5} \\ -\,3\frac{3}{5} \\ \hline 2\frac{1}{5} \end{array}$$

⑩
$$\begin{array}{r} 4\,3\frac{8}{8} \\ -\,\frac{3}{8} \\ \hline 3\frac{5}{8} \end{array}$$

⑪
$$\begin{array}{r} 6\,5\frac{9}{9} \\ -\,\frac{5}{9} \\ \hline 5\frac{4}{9} \end{array}$$

⑫
$$\begin{array}{r} 5\,4\frac{10}{10} \\ -\,2\frac{3}{10} \\ \hline 2\frac{7}{10} \end{array}$$

⑬
$$\begin{array}{r} 7\,6\frac{4}{4} \\ -\,4\frac{3}{4} \\ \hline 2\frac{1}{4} \end{array}$$

⑭
$$\begin{array}{r} {}^{2}\,3\frac{2}{5} + \frac{5}{5} = \frac{7}{5} \\ -\,1\frac{3}{5} \\ \hline 1\frac{4}{5} \end{array}$$

⑮
$$\begin{array}{r} 3\,4\frac{3}{8} + \frac{8}{8} = \frac{11}{8} \\ -\,3\frac{7}{8} \\ \hline \frac{4}{8} = \frac{1}{2} \end{array}$$

Practice

(16)

	6	5	4	
1	1/2	1/0	0/8	2
3	0/0	0/0	0/0	0
4	3/0	2/0	2/0	5
	0	7	0	

or

```
  122
  654
x 205
 3270
 0000
+130800
134,070
```

(17)

	6	5	4	
3	3/0	2/5	2/0	5
2	0/0	0/0	0/0	0
8	1/2	1/0	0/8	2
	3	0	8	

or

```
  22
  654
x 502
 1308
 0000
+327000
328,308
```

(18)

	6	5	4	
1	1/2	1/0	0/8	2
6	3/0	2/5	2/0	5
3	0/0	0/0	0/0	0
	5	0	0	

```
  1 2
  654
x 250
 1000
32700
130800
163,500
```

(19)

$$\begin{array}{r} {\scriptstyle 2r\ 2} \\ 654 \\ \times\ 520 \\ \hline 000 \\ 13080 \\ +\ 327000 \\ \hline 340{,}080 \end{array}$$

654

3	30	25	20	5
4	12	10	08	2
0	00	00	00	0
	0	8	0	

Study Link 8.4

① $\frac{3}{4}\ \frac{150}{200} < \frac{155}{200}$ $\quad \frac{3}{4}\ \frac{15}{20} < \frac{4}{5}\ \frac{16}{20}$

② $\frac{1}{10} = \frac{7}{70} + \frac{2}{7} = \frac{20}{70} = \frac{27}{70} < \frac{1}{2}$

③ $\frac{5}{6} = \frac{10}{12} - \frac{1}{4} = \frac{3}{12} = \frac{7}{12} > \frac{1}{2}$

④ $\frac{18}{20} - \frac{2}{5} = \frac{8}{20} = \frac{10}{20} = \frac{1}{2}$

⑤ $\frac{3}{4} = \frac{9}{12} - \frac{1}{3} = \frac{4}{12} = \frac{5}{12} < \frac{1}{2}$

⑥ Answers will vary:

$\frac{16}{1} + \frac{5}{16} = 6\frac{5}{16}$

Practice

⑦ $\begin{array}{r} {}^{2}\not{3}.{}^{9}\not{0}{}^{1}0 \\ -\ 2.564 \\ \hline 0.436 \end{array}$

⑧ $\begin{array}{r} {}^{1}2.{}^{1}56{}^{1}4 \\ \times\ \quad 3 \\ \hline 7.692 \end{array}$ or $\begin{array}{r} 2.564 \\ \times\ \quad 3 \\ \hline 7.692 \end{array}$

(9)

$$\begin{array}{r} {}^{5}\cancel{1}\,{}^{9}\cancel{6}\,{}^{9}\cancel{.}\,\cancel{0}\,\cancel{0}\,0 \\ -\ 5.438 \\ \hline 10.562 \end{array}$$

(10)

$$\begin{array}{r} 203 \text{ R4} \\ 15\overline{)3{,}049} \\ -30\downarrow \\ \hline 04 \\ -0\downarrow \\ \hline 49 \\ -45 \\ \hline 4 \end{array}$$

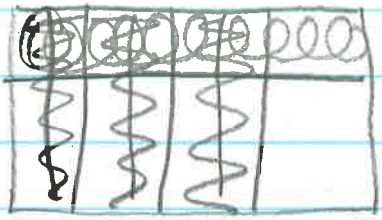
or

$$\begin{array}{r} 203.26\overline{6} \\ 15\overline{)3{,}049.00} \\ -30\downarrow \\ \hline 04 \\ -0\downarrow \\ \hline 49 \\ -45\downarrow \\ \hline 40 \\ -30\downarrow \\ \hline 100 \\ 90 \\ \hline 10 \end{array}$$

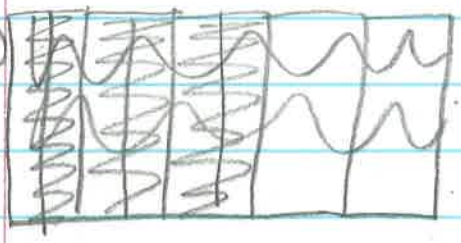
Study Link 8-5

① $\frac{3}{4}$ of the columns shade.

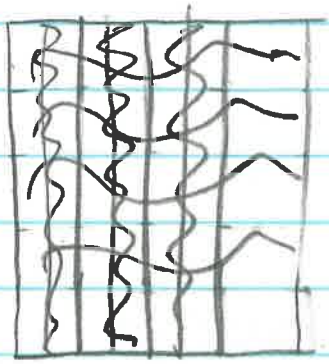
$\frac{1}{3}$ of the rows shade



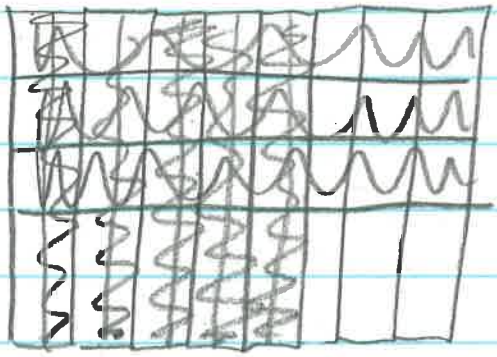
There are now 12 parts 3 which are shaded with both = $3/12 = 1/4$

② 

$\frac{2}{3}$ of $\frac{3}{5} = \frac{6}{15}$

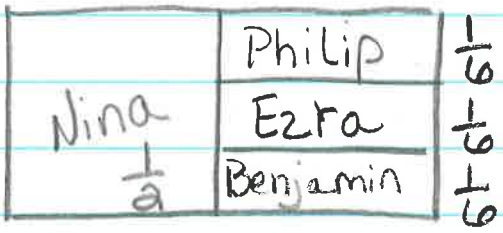
③ 

$\frac{3}{4}$ of $\frac{4}{5} = \frac{12}{20}$

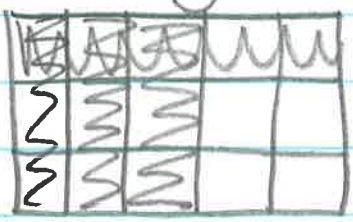
④ 

$\frac{5}{8}$ of $\frac{3}{5} = \frac{15}{40}$

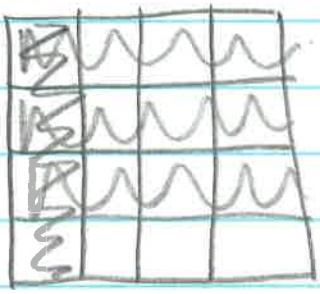
(5)



Study Link 8-6

① 

$\frac{1}{3} \times \frac{2}{5} = \frac{2}{15}$

② 

$\frac{3}{4} \times \frac{1}{4} = \frac{3}{16}$

③ 

$\frac{7}{8} \times \frac{1}{3} = \frac{7}{24}$

④ $\frac{3}{7} \times \frac{2}{10} = \frac{6}{70} = \frac{3}{35}$

⑤ $\frac{5}{6} \times \frac{2}{3} = \frac{10}{18} = \frac{5}{9}$

⑥ $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$

⑦ $\frac{4}{5} \times \frac{3}{5} = \frac{12}{25}$

⑧ $\frac{2}{3} \times \frac{3}{8} = \frac{6}{24} = \frac{1}{4}$

⑨ $\frac{1}{7} \times \frac{5}{9} = \frac{5}{63}$

tripling the amount

(10) $\frac{2}{3} \times \frac{3}{1} = \frac{6}{3} = 2$ cups

(11) $\frac{3}{5} \times \frac{15}{1} = \frac{45}{5} = 9$ goals by Julie's team

$\frac{1}{3} \times \frac{15}{1} = \frac{15}{3} = 5$ goals by Julie

Study Link 8.7

① $\frac{5}{3} \times \frac{9}{1} = \frac{45}{3} = 15$

② $\frac{3}{8} \times \frac{12}{1} = \frac{36}{8} = 4\frac{4}{8} = 4\frac{1}{2}$

③ $\frac{1}{8} \times \frac{5}{1} = \frac{5}{8}$

④ $\frac{20}{1} \times \frac{3}{4} = \frac{60}{4} = 15$

⑤ $\frac{5}{6} \times \frac{14}{1} = \frac{70}{6} = 11\frac{4}{6} = 11\frac{2}{3}$

⑥ $\frac{27}{1} \times \frac{2}{9} = \frac{54}{9} = 6$

⑦ $\frac{2}{3} \times \frac{4}{1} = \frac{8}{3} = 2\frac{2}{3}$

$\frac{4}{5} \times \frac{4}{1} = \frac{16}{5} = 3\frac{1}{5}$

$\frac{8}{9} \times \frac{4}{1} = \frac{32}{9} = 3\frac{5}{9}$

$\frac{5}{4} \times \frac{4}{1} = \frac{20}{4} = 5$

$\frac{7}{3} \times \frac{4}{1} = \frac{28}{3} = 9\frac{1}{3}$

⑧ $\frac{2}{1} \times \frac{1}{4} = \frac{1}{2}$

$\frac{3}{1} \times \frac{1}{4} = \frac{3}{4}$

$\frac{5}{6} \times \frac{1}{4} = \frac{5}{24}$

$\frac{2}{3} \times \frac{1}{4} = \frac{1}{6}$

⑨ Answers vary

Study Link 8.8

① a. $5\frac{3}{4} * \frac{2}{6} = \frac{23}{4} * \frac{2}{6} = \frac{46}{24} = 1\frac{11}{24}$

take the bottom times the whole add the top

b. $\frac{5}{8} \times \frac{2}{5} = \frac{10}{40} = \frac{1}{4}$

c. $4\frac{1}{4} \times \frac{5}{6} = \frac{17}{4} \times \frac{5}{6} = \frac{85}{24} = 3\frac{13}{24}$

d. $2\frac{1}{3} \times 3\frac{1}{8} = \frac{7}{3} \times \frac{25}{8} = \frac{175}{24} = 7\frac{7}{24}$

e. $3\frac{1}{12} \times 1\frac{3}{5} = \frac{37}{12} \times \frac{8}{5} = \frac{296}{60} = 4\frac{56}{60} = \frac{14}{15}$

f. $2\frac{4}{5} \times 3\frac{2}{8} = \frac{14}{5} \times \frac{26}{8} = \frac{364}{40} = 9\frac{4}{40} = \frac{1}{10}$

$$\begin{array}{r} 14 \\ \times\ 26 \\ \hline 84 \\ 280 \\ \hline 364 \end{array}$$

② a. $3\frac{2}{3} \times 2\frac{1}{3} = \frac{11}{3} \times \frac{7}{3} = \frac{77}{9} = 8\frac{5}{9}$

b. $2\frac{3}{4} \times 4 \times \frac{1}{2} = \frac{11}{4} \times \frac{4}{1} \times \frac{1}{2} = \frac{44}{8} = 5\frac{4}{8} = \frac{1}{2}$

c. $2\frac{1}{2} \times \frac{5}{6} = \frac{5}{2} \times \frac{5}{6} = \frac{25}{12} = 2\frac{1}{12}$

③ a. $2\frac{1}{2} \times 2 = \frac{5}{2} \times \frac{2}{1} = \frac{10}{2} = 5$

b $2\frac{1}{4} \times 2\frac{1}{2}$ $\frac{9}{4} \times \frac{5}{2} = \frac{45}{8} = 5\frac{5}{8}$

Study Link 8.9

①

Fraction	Decimal	Percent
$\frac{45}{100}$ or $\frac{9}{20}$	0.45	45%
$\frac{3}{10}$	0.30	30%
$\frac{2}{10}$	0.20	20%
$\frac{15}{100}$ or $\frac{3}{20}$	0.15	15%

②

	Estimated	Calculated
$\frac{400}{1} \times \frac{1}{4} = \frac{400}{4} =$	$100	$100
$\frac{10,000}{1} \times \frac{16}{100} = \frac{160,000}{100} =$ to estimate one could have rounded 16 to 15	$1,500	$1,600
78.35 → 80 × 10% = 78.35 × 10% = 7.835	$8	7.84
14.98 → 15 × 5% = $\frac{1498}{100} \times \frac{5}{100} = \frac{7490}{10000} =$	$0.75	$0.75
$29 → 30 × 30% = $\frac{29}{1} \times \frac{3}{10} = \frac{87}{10} =$	$9.00	$8.70

	Estimated	Calculated
$88 → 90 × 6% → 5% $\frac{88}{1} \times \frac{6}{100} = \frac{528}{100}$	$4.50	$5.28
$4,500 × 20 = 18 → 20% $\frac{4500}{1} \times \frac{18}{100} = \frac{81000}{100}$	$900	810
$1,100 = 1,000 × 35% $\frac{1,100}{1} \times \frac{35}{100} = \frac{38500}{100}$	$350	$385

4
45
×18
360
+450
81,000

35
11
35
+350
38,500

Study Link 8.10

① $\frac{4}{5}$ of $N = 16$ $16 \div 4 = 4$ so $4 = 1/5$ of the Number

$4 \times 5 = 20$ is the number

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

4	4	4	4	4	= 20

② $\frac{3}{4}$ of $N = 12$ $12 \div 3 = 4$

$4 \times 4 = 16$ Games played

③ $\frac{2}{3}$ of $N = 800$ $800 \div 2 = 400$

$400 \times 3 = 1200$ miles

④ $\frac{5}{8}$ of $N = 20$ $20 \div 5 = 4$

$4 \times 8 = 32$ cookies

⑤ $\frac{6}{8}$ of $N = 12$ $12 \div 6 = 2$

$2 \times 8 = 16$ minutes

⑥ $\frac{7}{10}$ of $N = 35$ $35 \div 7 = 5$

$5 \times 10 = 50$

Yes 55 minutes will be enough time

⑦ $\frac{100}{1} \times \frac{100}{100} = \frac{10000}{100} = 60$

$\frac{60}{1} \times \frac{60}{100} = \frac{3600}{100} = 36$

$\frac{70}{1} \times \frac{60}{100} = 42$

$\frac{110}{1} \times \frac{60}{100} = \frac{6600}{100} = 66$

$\frac{120}{1} \times \frac{60}{100} = 72$

$\frac{35}{1} \times \frac{60}{100} = \frac{2100}{100} = 21$

⑧ $\frac{24}{1} \times N = 9$ $\quad N = \frac{9}{24}$

$24\overline{)89.1000}$ $\quad .375$

$-72\downarrow$

$\quad 180$

$-168\downarrow$

$\quad 120$

-120

Rule

$.375 = 37.5\%$

Study Link 8.11

Sample answers

① $\frac{7}{8} \times \frac{2}{2} = \frac{14}{16}$

$\frac{7}{8} \times \frac{3}{3} = \frac{21}{24}$

$\frac{7}{8} \times \frac{4}{4} = \frac{28}{32}$

② $\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$

$\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$

$\frac{3}{4} \times \frac{4}{4} = \frac{12}{16}$

③ $\frac{6}{12} \div \frac{2}{2} = \frac{3}{6}$

$\frac{6}{12} \div \frac{3}{3} = \frac{2}{4}$

$\frac{6}{12} \div \frac{6}{6} = \frac{1}{2}$

④ $\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$

$\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$

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

⑤ $\frac{3}{8} = \frac{15}{40}$ $\quad \frac{4}{5} = \frac{32}{40}$

5 away from $\frac{1}{2}$ $\quad \frac{5}{9} = \frac{35}{63}$

⑥ $\frac{4}{7} \quad \frac{36}{63}$

⑦ $\frac{7}{8} = \frac{63}{72}$ $\quad \frac{7}{9} = \frac{56}{72}$

⑧ $\frac{4}{10} = \frac{24}{60}$, $\quad \frac{7}{12} = \frac{35}{60}$

⑨ 5 away from $\frac{1}{2}$ of 60

⑩ $\frac{5}{6} = \frac{20}{24}$

$+ \frac{3}{4} = \frac{18}{24}$

$\frac{38}{24} = 1\frac{14}{24} = 1\frac{7}{12}$

⑪ $\frac{7}{9} \quad \frac{28}{36}$

$- \frac{1}{6} \quad \frac{6}{36}$

$\frac{22}{36} = \frac{11}{18}$

(12) $7\frac{3}{3}$ (8)
$- \frac{2}{3}$
$7\frac{1}{3}$

(13) $\frac{7}{8} = \frac{21}{24}$
$- \frac{1}{6} = \frac{4}{24}$
$\frac{17}{24}$

(14) $\frac{3}{4} \times \frac{2}{5} = \frac{6}{20} = \frac{3}{10}$

(15) $\frac{4}{1} \times \frac{5}{6} = \frac{20}{6} = 3\frac{2}{6} = 3\frac{1}{3}$

Practice

(16) $5\,\overset{13}{\cancel{6}}\overset{9}{\cancel{4}},\overset{16}{\cancel{0}}\overset{12}{\cancel{7}}2$
$- 15,978$
$48,094$

(17)
$45\overline{)2297}$
2250 50 (2250)
47
45 1 (45)
2
51 R 2

(18) $1,674$
$- 1,204$
470

(19) $\overset{1}{3}\overset{1}{2}6$
684
$+ 934$
$1,944$

Study Link 8.12

① $4\frac{1}{4} = 3 + \frac{4}{4} + \frac{1}{4} = 3\frac{5}{4}$

② $5 \times 3 + 7 = \frac{22}{5}$

$\frac{3}{8} + \frac{8}{8} = \frac{11}{8}$

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

④ $2\frac{3}{8} - 1\frac{5}{8} = 1\frac{6}{8} = 1\frac{3}{4}$

⑤ $\frac{4}{9} + \frac{9}{9} = \frac{13}{9}$

$6\!\!\not{7}$

$-\ 5\frac{8}{9}$

$1\frac{5}{9}$

⑥

$3\frac{2}{7}\ \frac{10}{35}$

$+\ 1\frac{4}{5}\ \frac{28}{35}$

$4\frac{38}{35} = 1\frac{3}{35} + 4 = 5\frac{3}{35}$

⑦

$5\frac{2}{3}\ \frac{8}{12}$

$+\ 2\frac{3}{4}\ \frac{9}{12}$

$7\frac{17}{12} = 1\frac{5}{12} + 7 = 8\frac{5}{12}$

⑧

$3\not{4}\ {}^{4}\!/_{4}$

$-\ 1\ {}^{3}\!/_{4}$

$2\ {}^{1}\!/_{4}$

⑨ $\frac{3}{1} \times 3\frac{3}{4} = \frac{15}{4} = \frac{45}{4} - 11\frac{1}{4}$

⑩ $4\frac{2}{3} = \frac{14}{3} \times \frac{6}{7} = \frac{84}{21} = 4$

(11) $2\frac{1}{2} = \frac{5}{2}$ $\quad \frac{5}{2} \times \frac{9}{5} = \frac{45}{10} = 4\frac{5}{10} = 4\frac{1}{2}$

$1\frac{4}{5} = \frac{9}{5}$

(12) $\frac{3}{10} \times \frac{25}{3} = \frac{75}{30} = 2\frac{15}{30} = 2\frac{1}{2}$

(13) $5 \div \frac{2}{3}$ ← Flip the second fraction $\quad \frac{5}{1} \times \frac{3}{2} = \frac{15}{2} = 7\frac{1}{2}$

Change to multiplication ↑

(14) $\frac{4}{7} \times \frac{5}{3} = \frac{20}{21}$

(15) $4\frac{1}{8} \div \frac{3}{4} = \frac{33}{8} \times \frac{4}{3} = \frac{132}{24} = 5\frac{12}{24} = 5\frac{1}{2}$

Make Improper ↑

(16) $6\frac{2}{3} \div \frac{7}{9} = \frac{20}{3} \times \frac{9}{7} = \frac{180}{21} = 8\frac{12}{21} = 8\frac{4}{7}$