13D

1) 2×13
2) $2 \times 2 \times 3 \times 5$
3) $2 \times 2 \times 2 \times 3$
4) $\frac{18}{24} = \frac{\cancel{2} \times \cancel{3} \times 3}{\cancel{2} \times 2 \times 2 \times \cancel{3}} = \frac{3}{4}$
5) $\frac{15}{30} = \frac{\cancel{3} \times \cancel{5}}{2 \times \cancel{3} \times \cancel{5}} = \frac{1}{2}$
6) $\frac{8}{32} + \frac{8}{32} = \frac{16}{32} \div \frac{16}{16} = \frac{1}{2}$
7) $\frac{10}{16} - \frac{8}{16} = \frac{2}{16} \div \frac{2}{2} = \frac{1}{8}$
8) $\frac{6}{21} + \frac{7}{21} = \frac{13}{21}$
9) $\frac{2}{12} \div \frac{6}{12} = \frac{2 \div 6}{1} = \frac{2}{6} \div \frac{2}{2} = \frac{1}{3}$
10) $\frac{5}{9} \times \frac{3}{7} = \frac{15}{63} \div \frac{3}{3} = \frac{5}{21}$
11) $\frac{8}{11} \times \frac{3}{4} = \frac{24}{44} \div \frac{4}{4} = \frac{6}{11}$
12) done
13) $178\frac{8}{53}$
14) $26\frac{11}{189}$
15) $1/6 \times 12 = 2$
16) $\frac{3}{4} + \frac{1}{8} = \frac{24}{32} + \frac{4}{32} = \frac{28}{32} \div \frac{4}{4} = \frac{7}{8}$
17) $2{,}845 \div 5 = 569$
18) $528 \times 73 = 38{,}544$

13E

1) $3 \times 3 \times 3 \times 3$
2) $2 \times 3 \times 3 \times 5$
3) $3 \times 5 \times 5$
4) $\frac{8}{22} = \frac{\cancel{2} \times 2 \times 2}{\cancel{2} \times 11} = \frac{4}{11}$
5) $\frac{32}{48} = \frac{\cancel{2} \times \cancel{2} \times \cancel{2} \times \cancel{2} \times 2}{\cancel{2} \times \cancel{2} \times \cancel{2} \times \cancel{2} \times 3} = \frac{2}{3}$
6) $\frac{6}{12} + \frac{4}{12} = \frac{10}{12} \div \frac{2}{2} = \frac{5}{6}$
7) $\frac{18}{27} - \frac{9}{27} = \frac{9}{27} \div \frac{9}{9} = \frac{1}{3}$
8) $\frac{30}{50} + \frac{5}{50} = \frac{35}{50} \div \frac{5}{5} = \frac{7}{10}$
9) $\frac{16}{64} \div \frac{48}{64} = \frac{16 \div 48}{1} = \frac{16}{48} \div \frac{16}{16} = \frac{1}{3}$
10) $\frac{5}{9} \times \frac{2}{6} = \frac{10}{54} \div \frac{2}{2} = \frac{5}{27}$
11) $\frac{2}{5} \times \frac{3}{4} = \frac{6}{20} \div \frac{2}{2} = \frac{3}{10}$
12) $\frac{30}{48} < \frac{32}{48}$
13) $\frac{7}{21} > \frac{6}{21}$
14) $\frac{40}{80} = \frac{40}{80}$
15) $29\frac{28}{38}$ or $29\frac{14}{19}$
16) $122\frac{2}{22}$ or $122\frac{1}{11}$
17) $21\frac{97}{235}$
18) $45 \times 365 = 16{,}425$
19) $\frac{12}{36} + \frac{15}{36} = \frac{27}{36}$
20) $\frac{27}{36}$ of 60: $\frac{27}{36} \times \frac{60}{1} = \frac{1{,}620}{36} = 45$ min.

3/4 of 60: $60 \div 4 = 15$; $15 \times 3 = 45$
The reduced fraction is easier to use.

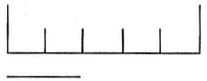
13F

1) $2 \times 2 \times 2 \times 2 \times 2 \times 2$
2) $2 \times 2 \times 2 \times 2$
3) $3 \times 3 \times 5$
4) $\frac{81}{90} = \frac{\cancel{3} \times \cancel{3} \times 3 \times 3}{2 \times \cancel{3} \times \cancel{3} \times 5} = \frac{9}{10}$
5) $\frac{12}{18} = \frac{\cancel{2} \times 2 \times \cancel{3}}{\cancel{2} \times \cancel{3} \times 3} = \frac{2}{3}$
6) $\frac{18}{48} + \frac{8}{48} = \frac{26}{48} \div \frac{2}{2} = \frac{13}{24}$
7) $\frac{45}{50} - \frac{20}{50} = \frac{25}{50} \div \frac{25}{25} = \frac{1}{2}$
8) $\frac{12}{24} + \frac{6}{24} = \frac{18}{24} \div \frac{6}{6} = \frac{3}{4}$
9) $\frac{10}{50} \div \frac{20}{50} = \frac{10 \div 20}{1} = \frac{10}{20} \div \frac{10}{10} = \frac{1}{2}$
10) $\frac{4}{7} \times \frac{2}{8} = \frac{8}{56} \div \frac{8}{8} = \frac{1}{7}$
11) $\frac{5}{12} \times \frac{3}{5} = \frac{15}{60} \div \frac{15}{15} = \frac{1}{4}$
12) $\frac{60}{110} < \frac{77}{110}$
13) $\frac{9}{36} < \frac{16}{36}$
14) $\frac{15}{36} > \frac{12}{36}$
15) $37\frac{69}{96}$ or $37\frac{23}{32}$
16) $98\frac{38}{73}$
17) $56\frac{111}{120}$ or $56\frac{37}{40}$
18) $2{,}075 \div 25 = 83$
19) $\frac{6}{18} + \frac{3}{18} = \frac{9}{18} = \frac{1}{2}$

$\frac{1}{2} + \frac{1}{8} = \frac{8}{16} + \frac{2}{16} = \frac{10}{16} = \frac{5}{8}$

20) $\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$

14A

1) done
2) $\frac{7}{10}$
3) $\frac{2}{3}$
4) $\frac{3}{7}$
5) done
6) 
7) done
8) $\frac{12}{16} = \frac{3}{4}$
9) $\frac{8}{16} = \frac{1}{2}$
10) $\frac{3}{16}$
11) $\frac{14}{16} = \frac{7}{8}$
12) $\frac{10}{16} = \frac{5}{8}$

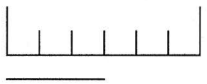
14B

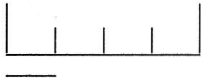
1) $\frac{1}{3}$

2) $\frac{5}{8}$

3) $\frac{5}{6}$

4) $\frac{3}{10}$

5) 

6) 

7) $\frac{1}{16}$

8) $\frac{4}{16} = \frac{1}{4}$

9) $\frac{7}{16}$

10) $\frac{16}{16} = 1$

11) $\frac{15}{16}$

12) $\frac{8}{16} = \frac{1}{2}$

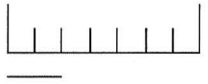
14C

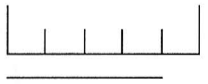
1) $\frac{6}{10}$

2) $\frac{4}{7}$

3) $\frac{3}{6}$

4) $\frac{1}{4}$

5) 

6) 

7) $\frac{11}{16}$

8) $\frac{2}{16} = \frac{1}{8}$

9) $\frac{6}{16} = \frac{3}{8}$

10) $\frac{9}{16}$

11) $\frac{13}{16}$

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

14D

1) $\frac{7}{8}$

2) $\frac{3}{6} = \frac{1}{2}$

3) $\frac{5}{16}$

4) $\frac{14}{16} = \frac{7}{8}$

5) 2 x 2 x 7

6) 5 x 11

7) 2 x 2 x 3 x 7

8) $\frac{48}{64} = \frac{2 \times 2 \times 2 \times 2 \times 3}{2 \times 2 \times 2 \times 2 \times 2 \times 2} = \frac{3}{4}$

9) done

10) 20 x 10 = 200 sq. ft.

11) 15 x 7 = 105 sq. yds.

12) no

13) yes

14) 12: 2, 3, 4, 6, 12
18: 2, 3, 6, 9, 18
GCF = 6

15) 25: 5, 25
50: 2, 5, 25
GCF = 25

16) 15 x 13 = 195 sq. ft.

14E

1) $\frac{2}{6} = \frac{1}{3}$

2) $\frac{6}{7}$

3) $\frac{10}{16} = \frac{5}{8}$

4) $\frac{3}{16}$

5) 2 x 5 x 7

6) 3 x 3 x 5

7) 2 x 3 x 5

8) $\frac{33}{63} = \frac{3 \times 11}{3 \times 3 \times 7} = \frac{11}{21}$

9) 8 x 5 = 40 sq. in.

10) 90 x 45 = 4,050 sq. ft.

11) 28 x 15 = 420 sq. yds.

12) no

13) 21: 3, 7, 21
42: 2, 3, 6, 7, 14, 21, 42
GCF = 21

14) $\frac{3}{4} \times \frac{1}{3} = \frac{3}{12} \div \frac{3}{3} = \frac{1}{4}$

15) $\frac{8}{12} < \frac{9}{12}$ so $\frac{2}{3} < \frac{3}{4}$

16) $\frac{9}{12} - \frac{8}{12} = \frac{1}{12}$ cup

17) 15 + 13 + 15 + 13 = 56 ft.

18) 3/4 of 56 = 42
56 - 42 = 14 ft. needed

14F

1) $\frac{2}{3}$

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

3) $\frac{7}{16}$

4) $\frac{16}{16} = 1$

5) 2 x 3 x 11

6) 2 x 2 x 7

7) 2 x 3 x 3 x 3

8) $\frac{75}{100} = \frac{3 \times 5 \times 5}{2 \times 2 \times 5 \times 5} = \frac{3}{4}$

9) 3 x 2 = 6 sq. in.

10) 11 x 6 = 66 sq. ft.

11) 35 x 19 = 665 sq. yds.

12) yes

13) 24: 2, 3, 4, 6, 8, 12, 24
36: 2, 3, 4, 6, 9, 12, 18, 36
GCF = 12

14) $\frac{18}{42} + \frac{7}{42} = \frac{25}{42}$ no

15) $\frac{8}{12} \div \frac{1}{6} = \frac{48}{72} \div \frac{12}{72} = \frac{48 \div 12}{1} = 4$

16) 36 x 12 = 432

17) 2,160 ÷ 432 = 5

18) area