

21A

- 1) done
- 2)  $3\frac{15}{40} + 1\frac{32}{40} = 4\frac{47}{40} = 5\frac{7}{40}$
- 3)  $18\frac{32}{80} + 3\frac{50}{80} = 21\frac{82}{80} = 22\frac{2}{80} = 22\frac{1}{40}$
- 4)  $11\frac{18}{30} + 4\frac{25}{30} = 15\frac{43}{30} = 16\frac{13}{30}$
- 5)  $9\frac{4}{12} + 6\frac{3}{12} = 15\frac{7}{12}$
- 6)  $4\frac{10}{15} + 1\frac{6}{15} = 5\frac{16}{15} = 6\frac{1}{15}$
- 7)  $9\frac{30}{50} + 2\frac{35}{50} = 11\frac{65}{50} = 12\frac{15}{50} = 12\frac{3}{10}$
- 8)  $12\frac{72}{80} + 4\frac{50}{80} = 16\frac{122}{80} = 16\frac{61}{40} = 17\frac{21}{40}$
- 9)  $3\frac{4}{8} + 1\frac{6}{8} = 4\frac{10}{8} = 5\frac{2}{8} = 5\frac{1}{4}$
- 10)  $4\frac{20}{32} + 1\frac{8}{32} = 5\frac{28}{32} = 5\frac{7}{8}$

21B

- 1)  $7\frac{15}{20} + 9\frac{12}{20} = 16\frac{27}{20} = 17\frac{7}{20}$
- 2)  $6\frac{18}{24} + 6\frac{20}{24} = 12\frac{38}{24} = 12\frac{19}{12} = 13\frac{7}{12}$
- 3)  $19\frac{70}{80} + 2\frac{40}{80} = 21\frac{110}{80} = 21\frac{11}{8} = 22\frac{3}{8}$
- 4)  $12\frac{24}{33} + 5\frac{22}{33} = 17\frac{46}{33} = 18\frac{13}{33}$
- 5)  $8\frac{12}{15} + 2\frac{5}{15} = 10\frac{17}{15} = 11\frac{2}{15}$
- 6)  $4\frac{15}{20} + 2\frac{4}{20} = 6\frac{19}{20}$
- 7)  $6\frac{15}{27} + 8\frac{9}{27} = 14\frac{24}{27} = 14\frac{8}{9}$
- 8)  $6\frac{18}{27} + 1\frac{21}{27} = 7\frac{39}{27} = 7\frac{13}{9} = 8\frac{4}{9}$
- 9)  $7\frac{15}{50} + 9\frac{40}{50} = 16\frac{55}{50} = 16\frac{11}{10} = 17\frac{1}{10}$
- 10)  $2\frac{6}{10} + 1\frac{5}{10} = 3\frac{11}{10} = 4\frac{1}{10}$

21C

- 1)  $6\frac{4}{10} + 2\frac{5}{10} = 8\frac{9}{10}$
- 2)  $5\frac{27}{63} + 3\frac{7}{63} = 8\frac{34}{63}$
- 3)  $2\frac{5}{40} + \frac{32}{40} = 2\frac{37}{40}$
- 4)  $8\frac{27}{63} + 7\frac{14}{63} = 15\frac{41}{63}$
- 5)  $3\frac{8}{10} + 4\frac{5}{10} = 7\frac{13}{10} = 8\frac{3}{10}$
- 6)  $2\frac{7}{21} + 5\frac{15}{21} = 7\frac{22}{21} = 8\frac{1}{21}$
- 7)  $6\frac{6}{10} + 4\frac{5}{10} = 10\frac{11}{10} = 11\frac{1}{10}$
- 8)  $1\frac{15}{20} + 5\frac{12}{20} = 6\frac{27}{20} = 7\frac{7}{20}$
- 9)  $13\frac{12}{42} + 4\frac{7}{42} = 17\frac{19}{42}$
- 10)  $16\frac{4}{8} + 17\frac{6}{8} = 33\frac{10}{8} = 34\frac{2}{8} = 34\frac{1}{4}$

21D

- 1)  $8\frac{25}{35} + 4\frac{21}{35} = 12\frac{46}{35} = 13\frac{11}{35}$
- 2)  $6\frac{20}{28} + 1\frac{21}{28} = 7\frac{41}{28} = 8\frac{13}{28}$
- 3)  $4\frac{7}{6} - 2\frac{4}{6} = 2\frac{3}{6} = 2\frac{1}{2}$
- 4)  $6\frac{2}{5} - 1\frac{1}{5} = 5\frac{1}{5}$
- 5)  $13\frac{13}{10} - 9\frac{9}{10} = 4\frac{4}{10} = 4\frac{2}{5}$
- 6)  $\frac{2}{6} \div \frac{3}{6} = \frac{2 \div 3}{1} = \frac{2}{3}$
- 7)  $\frac{9}{18} \div \frac{12}{18} = \frac{9 \div 12}{1} = \frac{9}{12} = \frac{3}{4}$
- 8)  $\frac{20}{50} \div \frac{20}{50} = \frac{20 \div 20}{1} = 1$
- 9)  $\frac{1}{8} \times \frac{6}{7} = \frac{6}{56} = \frac{3}{28}$
- 10)  $\frac{4}{5} \times \frac{1}{9} = \frac{4}{45}$
- 11)  $\frac{3}{5} \times \frac{5}{6} = \frac{15}{30} = \frac{1}{2}$
- 12)  $99 \div 3 = 33$  yds.
- 13)  $6 \div 2 = 3$  qts.
- 14)  $36 \times 2 = 72$  pts.
- 15) 10
- 16) 72
- 17)  $13 \div 3 = 4\frac{1}{3}$
- 18)  $1\frac{4}{8} + 1\frac{6}{8} = 2\frac{10}{8} = 2\frac{5}{4} = 3\frac{1}{4}$

21E

- 1)  $8\frac{8}{12} + 5\frac{9}{12} = 13\frac{17}{12} = 14\frac{5}{12}$
- 2)  $3\frac{15}{40} + 1\frac{16}{40} = 4\frac{31}{40}$
- 3)  $2\frac{5}{4} - 1\frac{3}{4} = 1\frac{2}{4} = 1\frac{1}{2}$
- 4)  $6\frac{6}{5} - 6\frac{4}{5} = \frac{2}{5}$
- 5)  $4\frac{3}{3} - 1\frac{2}{3} = 3\frac{1}{3}$
- 6)  $\frac{20}{32} \div \frac{8}{32} = \frac{20 \div 8}{1} = \frac{20}{8} = \frac{5}{2} = 2\frac{1}{2}$
- 7)  $\frac{3}{7} \div \frac{1}{7} = \frac{3 \div 1}{1} = 3$
- 8)  $\frac{15}{27} \div \frac{18}{27} = \frac{15 \div 18}{1} = \frac{15}{18} = \frac{5}{6}$
- 9)  $\frac{1}{9} \times \frac{7}{8} = \frac{7}{72}$
- 10)  $\frac{2}{3} \times \frac{1}{2} = \frac{2}{6} = \frac{1}{3}$
- 11)  $\frac{7}{10} \times \frac{1}{5} = \frac{7}{50}$
- 12)  $7\frac{1}{2} + 7\frac{1}{2} = 14\frac{2}{2} = 15$   
 $3\frac{1}{4} + 3\frac{1}{4} = 6\frac{2}{4} = 6\frac{1}{2}$   
 $15 + 6\frac{1}{2} = 21\frac{1}{2}$  in.
- 13)  $5\frac{1}{2} + 5\frac{1}{2} + 5\frac{1}{2} + 5\frac{1}{2} = 20\frac{4}{2} = 22$  in.
- 14)  $4\frac{1}{3} + 5\frac{2}{3} = 9\frac{3}{3} = 10$   
 $10 + 3\frac{1}{2} = 13\frac{1}{2}$  ft.
- 15)  $8 \times 6 \times 3 = 144$  cu. ft.
- 16)  $144 \div 12 = 12$  cu. ft. drained  
 $144 - 12 = 132$  cu. ft. left
- 17)  $17,259 \div 3 = 5,753$  yds.
- 18)  $25 \div 2 = 12\frac{1}{2}$  qts.
- 19) answers will vary
- 20) 5

21F

- 1)  $18\frac{56}{80} + 3\frac{50}{80} = 21\frac{106}{80} = 22\frac{26}{80} = 22\frac{13}{40}$
- 2)  $11\frac{18}{30} + 4\frac{5}{30} = 15\frac{23}{30}$
- 3)  $9\frac{3}{7} - 5\frac{1}{7} = 4\frac{2}{7}$
- 4)  $16\frac{7}{5} - 8\frac{3}{5} = 8\frac{4}{5}$
- 5)  $5\frac{8}{8} - 2\frac{7}{8} = 3\frac{1}{8}$
- 6)  $\frac{24}{32} \div \frac{8}{32} = \frac{24 \div 8}{1} = 3$
- 7)  $\frac{40}{50} \div \frac{5}{50} = \frac{40 \div 5}{1} = 8$
- 8)  $\frac{60}{72} \div \frac{6}{72} = \frac{60 \div 6}{1} = 10$
- 9)  $\frac{4}{5} \times \frac{1}{6} = \frac{4}{30} = \frac{2}{15}$
- 10)  $\frac{5}{6} \times \frac{2}{8} = \frac{10}{48} = \frac{5}{24}$
- 11)  $\frac{3}{5} \times \frac{4}{7} = \frac{12}{35}$
- 12)  $\frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$  sq. ft.
- 13)  $\frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$  sq. ft.
- 14)  $\frac{1}{2} \times 2 \times \frac{5}{7} = \frac{5}{7}$  sq. in.
- 15)  $\frac{5}{6} \times \frac{3}{5} = \frac{15}{30} = \frac{1}{2}$
- 16)  $5 \times 5 \times 5 = 125$  cu. ft.  
 $125 \times 56 = 7,000$  lbs.
- 17)  $577 \div 3 = 192\frac{1}{3}$  yds.
- 18)  $10 - 5\frac{1}{2} = 9\frac{2}{2} - 5\frac{1}{2} = 4\frac{1}{2}$  years
- 19) answers will vary
- 20) 8