

23E

- 1) $\frac{2}{3} \div \frac{5}{7} = \frac{2}{3} \times \frac{7}{5} = \frac{14}{15}$
- 2) $\frac{14}{21} \div \frac{15}{21} = \frac{14 \div 15}{1} = \frac{14}{15}$
- 3) $\frac{9}{10} \div \frac{1}{5} = \frac{9}{10} \times \frac{5}{1} = \frac{45}{10} = \frac{9}{2} = 4\frac{1}{2}$
- 4) $\frac{45}{50} \div \frac{10}{50} = \frac{45 \div 10}{1} = \frac{45}{10} = \frac{9}{2} = 4\frac{1}{2}$
- 5) $\frac{23}{5} \div \frac{17}{7} = \frac{23}{5} \times \frac{7}{17} = \frac{161}{85} = 1\frac{76}{85}$
- 6) $\frac{9}{5} \div \frac{4}{3} = \frac{9}{5} \times \frac{3}{4} = \frac{27}{20} = 1\frac{7}{20}$
- 7) $4\frac{6}{8} - 1\frac{4}{8} = 3\frac{2}{8} = 3\frac{1}{4}$
- 8) $13\frac{6}{21} - 11\frac{7}{21} = 12\frac{27}{21} - 11\frac{7}{21} = 1\frac{20}{21}$
- 9) $3\frac{1}{3} + 2\frac{2}{3} = 5\frac{3}{3} = 6$
- 10) $\frac{15}{20} + \frac{12}{20} = \frac{27}{20}$
 $\frac{27}{20} + \frac{6}{10} = \frac{270}{200} + \frac{120}{200} = \frac{390}{200} = \frac{39}{20} = 1\frac{19}{20}$
- 11) $\frac{7}{21} + \frac{15}{21} = \frac{22}{21}$
 $\frac{22}{21} + \frac{2}{5} = \frac{110}{105} + \frac{42}{105} = \frac{152}{105} = 1\frac{47}{105}$
- 12) $\frac{3}{6} + \frac{4}{6} = \frac{7}{6}$
 $\frac{7}{6} + \frac{4}{7} = \frac{49}{42} + \frac{24}{42} = \frac{73}{42} = 1\frac{31}{42}$
- 13) $64 \div 16 = 4$ lbs.
- 14) $6 \times 16 = 96$ oz.
- 15) $13 \div 4 = 3\frac{1}{4}$ gal.
- 16) $1/2 \times 20 \times 5 = 50$ sq. ft.
- 17) $10\frac{1}{2} + 7\frac{1}{2} = 17\frac{2}{2} = 18$ ft; $18 \div 3 = 6$ yds.
- 18) $\frac{93}{10} \div \frac{12}{5} = \frac{93}{10} \times \frac{5}{12} = \frac{465}{120} = 3\frac{105}{120} = 3\frac{7}{8}$ ft.
- 19) $7 \times 7 \times 7 = 343$ cu. ft.
- 20) 44

23F

- 1) $\frac{5}{9} \div \frac{2}{3} = \frac{5}{9} \times \frac{3}{2} = \frac{15}{18} = \frac{5}{6}$
- 2) $\frac{15}{27} \div \frac{18}{27} = \frac{15 \div 18}{1} = \frac{15}{18} = \frac{5}{6}$
- 3) $\frac{1}{2} \div \frac{1}{3} = \frac{1}{2} \times \frac{3}{1} = \frac{3}{2} = 1\frac{1}{2}$
- 4) $\frac{3}{6} \div \frac{2}{6} = \frac{3 \div 2}{1} = \frac{3}{2} = 1\frac{1}{2}$
- 5) $\frac{11}{4} \div \frac{5}{8} = \frac{11}{4} \times \frac{8}{5} = \frac{88}{20} = 4\frac{8}{20} = 4\frac{2}{5}$
- 6) $\frac{12}{5} \div \frac{7}{6} = \frac{12}{5} \times \frac{6}{7} = \frac{72}{35} = 2\frac{2}{35}$
- 7) $11\frac{8}{7} - 6\frac{4}{7} = 5\frac{4}{7}$
- 8) $3\frac{2}{16} - 2\frac{8}{16} = 2\frac{18}{16} - 2\frac{8}{16} = \frac{10}{16} = \frac{5}{8}$
- 9) $5\frac{5}{50} + 2\frac{20}{50} = 7\frac{25}{50} = 7\frac{1}{2}$
- 10) $\frac{3}{4} = \frac{6}{8} = \frac{9}{12}$
- 11) $\frac{1}{8} = \frac{2}{16} = \frac{3}{24}$
- 12) $\frac{7}{10} = \frac{14}{20} = \frac{21}{30}$
- 13) $21 \div 16 = \frac{21}{16} = 1\frac{5}{16}$ lbs.
- 14) $14 \div 2 = 7$ qts.
- 15) $25 \times 3 = 75$ ft.
- 16) $\frac{15}{4} \div \frac{5}{1} = \frac{15}{4} \times \frac{1}{5} = \frac{15}{20} = \frac{3}{4}$ lb.
- 17) $14 \times 11 \times 9 = 1,386$ cu. ft.
- 18) $1/10$
- 19) $3/4$ of 20 = 15 gal. used
 $20 - 15 = 5$ gal. left
 $5 \times 4 = 20$ qts. left
- 20) 50

24A

- 1) done
- 2) done
- 3) $\frac{10}{9}$
- 4) $\frac{1}{7}$
- 5) done
- 6) done
- 7) $\frac{1}{8} \cdot 8A = 40 \cdot \frac{1}{8}$
 $A = 5$
- 8) $8(5) = 40$
 $40 = 40$
- 9) $\frac{1}{3} \cdot 3D = 27 \cdot \frac{1}{3}$
 $D = 9$
- 10) $3(9) = 27$
 $27 = 27$
- 11) $\frac{1}{11} \cdot 11Y = 121 \cdot \frac{1}{11}$
 $Y = 11$
- 12) $11(11) = 121$
 $121 = 121$
- 13) $\frac{1}{3} \cdot 3R = 12 \cdot \frac{1}{3}$
 $R = 4$
- 14) $\frac{1}{4} \cdot 4D = 48 \cdot \frac{1}{4}$
 $D = \$12$

24B

- 1) $\frac{3}{2}$
- 2) $\frac{10}{10}$
- 3) $\frac{8}{1} = 8$
- 4) $\frac{1}{2}$
- 5) $\frac{1}{8} \cdot 8Z = 72 \cdot \frac{1}{8}$
 $Z = 9$
- 6) $8(9) = 72$
 $72 = 72$
- 7) $\frac{1}{10} \cdot 10C = 100 \cdot \frac{1}{10}$
 $C = 10$
- 8) $10(10) = 100$
 $100 = 100$
- 9) $\frac{1}{5} \cdot 5F = 25 \cdot \frac{1}{5}$
 $F = 5$
- 10) $5(5) = 25$
 $25 = 25$
- 11) $\frac{1}{2} \cdot 2A = 6 \cdot \frac{1}{2}$
 $A = 3$
- 12) $2(3) = 6$
 $6 = 6$
- 13) $\frac{1}{2} \cdot 2A = 12 \cdot \frac{1}{2}$
 $A = 6$
- 14) $\frac{1}{5} \cdot 5B = 15 \cdot \frac{1}{5}$
 $B = 3$

24C

- 1) $\frac{9}{7}$
- 2) $\frac{1}{8}$
- 3) $\frac{2}{3}$
- 4) $\frac{1}{32}$
- 5) $\frac{1}{4} \cdot 4B = 8 \cdot \frac{1}{4}$
B = 2.
- 6) $4(2) = 8$
8 = 8
- 7) $\frac{1}{5} \cdot 5E = 20 \cdot \frac{1}{5}$
E = 4
- 8) $5(4) = 20$
20 = 20
- 9) $\frac{1}{2} \cdot 2H = 24 \cdot \frac{1}{2}$
H = 12
- 10) $2(12) = 24$
24 = 24
- 11) $\frac{1}{3} \cdot 3C = 63 \cdot \frac{1}{3}$
C = 21
- 12) $3(21) = 63$
63 = 63
- 13) $5A = 50$
 $\frac{1}{5} \cdot 5A = 50 \cdot \frac{1}{5}$
A = 10
Student may have used a different letter.
- 14) $9X = 81$
 $\frac{1}{9} \cdot 9X = 81 \cdot \frac{1}{9}$
X = 9 ft

24D

- 1) $\frac{1}{7} \cdot 7F = 49 \cdot \frac{1}{7}$
F = 7
- 2) $7(7) = 49$
49 = 49
- 3) $\frac{1}{12} \cdot 12R = 36 \cdot \frac{1}{12}$
R = 3
- 4) $12(3) = 36$
36 = 36
- 5) $\frac{1}{2} \div \frac{1}{4} = \frac{1}{2} \times \frac{4}{1} = \frac{4}{2} = 2$
- 6) $\frac{4}{8} \div \frac{2}{8} = \frac{4 \div 2}{1} = 2$
- 7) $\frac{2}{5} \div \frac{11}{6} = \frac{2}{5} \times \frac{6}{11} = \frac{12}{55}$
- 8) $\frac{11}{2} \div \frac{22}{9} = \frac{11}{2} \times \frac{9}{22} = \frac{99}{44} = \frac{9}{4} = 2 \frac{1}{4}$
- 9) $8 \frac{10}{35} - 3 \frac{28}{35} = 7 \frac{45}{35} - 3 \frac{28}{35} = 4 \frac{17}{35}$
- 10) $16 \frac{5}{8} - 10 \frac{3}{8} = 6 \frac{2}{8} = 6 \frac{1}{4}$
- 11) ~~$5 \frac{14}{20} + 4 \frac{10}{20} = 9 \frac{24}{20} = 10 \frac{4}{20} = 10 \frac{1}{5}$~~
- 12) done
- 13) done
- 14) $60 \div 12 = 5$ ft.
- 15) $8 \times 12 = 96$ in.
- 16) $4X = 16$
 $\frac{1}{4} \cdot 4X = 16 \cdot \frac{1}{4}$
X = 4
- 17) $5 \times 16 = 80$ oz.
- 18) 8

24E

- 1) $\frac{1}{6} \cdot 6G = 42 \cdot \frac{1}{6}$
G = 7
- 2) $6(7) = 42$
42 = 42
- 3) $\frac{1}{9} \cdot 9S = 54 \cdot \frac{1}{9}$
S = 6
- 4) $9(6) = 54$
54 = 54
- 5) $\frac{6}{8} \div \frac{1}{2} = \frac{6}{8} \times \frac{2}{1} = \frac{12}{8} = \frac{3}{2} = 1 \frac{1}{2}$
- 6) $\frac{12}{16} \div \frac{8}{16} = \frac{12 \div 8}{1} = \frac{12}{8} = \frac{3}{2} = 1 \frac{1}{2}$
- 7) $\frac{34}{5} \div \frac{5}{3} = \frac{34}{5} \times \frac{3}{5} = \frac{102}{25} = 4 \frac{2}{25}$
- 8) $\frac{25}{3} \div \frac{45}{8} = \frac{25}{3} \times \frac{8}{45} = \frac{200}{135} = 1 \frac{65}{135} = 1 \frac{13}{27}$
- 9) $4 \frac{1}{4} + 2 \frac{3}{4} = 6 \frac{4}{4} = 7$
- 10) $2 \frac{5}{50} + 6 \frac{10}{50} = 8 \frac{15}{50} = 8 \frac{3}{10}$
- 11) $13 \frac{9}{18} - 5 \frac{14}{18} = 12 \frac{27}{18} - 5 \frac{14}{18} = 7 \frac{13}{18}$
- 12) $\frac{5}{6} \times \frac{2}{3} = \frac{10}{18} = \frac{5}{9}$
- 13) $\frac{4}{5} \times \frac{2}{7} = \frac{8}{35}$
- 14) $\frac{1}{9} \times \frac{3}{8} = \frac{3}{72} = \frac{1}{24}$
- 15) $3S = 45$; S = 15 yrs.
- 16) $A = 5/8 \times 5/8 = 25/64$ sq. in.
 $P = \frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} = \frac{20}{8} = \frac{5}{2} = 2 \frac{1}{2}$ in.
- 17) $32 \div 3 = 10 \frac{2}{3}$
- 18) $32 \times 12 = 384$ in.
- 19) $15 \times 15 = 225$
- 20) 21

24F

- 1) $\frac{1}{8} \cdot 8H = 72 \cdot \frac{1}{8}$
H = 9
- 2) $8(9) = 72$
72 = 72
- 3) $\frac{1}{11} \cdot 11T = 55 \cdot \frac{1}{11}$
T = 5
- 4) $11(5) = 55$
55 = 55
- 5) $\frac{1}{4} \div \frac{1}{3} = \frac{1}{4} \times \frac{3}{1} = \frac{3}{4}$
- 6) $\frac{3}{12} \div \frac{4}{12} = \frac{3 \div 4}{1} = \frac{3}{4}$
- 7) $\frac{7}{2} \div \frac{13}{3} = \frac{7}{2} \times \frac{3}{13} = \frac{21}{26}$
- 8) $\frac{23}{5} \div \frac{5}{3} = \frac{23}{5} \times \frac{3}{5} = \frac{69}{25} = 2 \frac{19}{25}$
- 9) $8 \frac{3}{4} - 8 \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$
- 10) $3 \frac{14}{16} + 2 \frac{8}{16} = 5 \frac{22}{16} = 6 \frac{6}{16} = 6 \frac{3}{8}$
- 11) $7 \frac{16}{40} - 3 \frac{25}{40} = 6 \frac{56}{40} - 3 \frac{25}{40} = 3 \frac{31}{40}$
- 12) $\frac{3}{4} \times \frac{1}{8} = \frac{3}{32}$
- 13) $\frac{1}{3} \times \frac{3}{7} = \frac{3}{21} = \frac{1}{7}$
- 14) $\frac{2}{5} \times \frac{5}{6} = \frac{10}{30} = \frac{1}{3}$
- 15) $6D = 18$; D = 3
- 16) $5 + 10 + 5 + 10 = 30$ ft.
 $30 \div 3 = 10$ yds.
- 17) $5 \frac{4}{8} - 4 \frac{6}{8} = 4 \frac{12}{8} - 4 \frac{6}{8} = \frac{6}{8} = \frac{3}{4}$ gal.
- 18) $3/4$ of 12 = 9 in.
- 19) $3/4 \times 4 = 12/4 = 3$ qts.
- 20) 3