

22F

- 1) $.08G + .59 = 1.39$
 $.08G = 1.39 - .59$
 $.08G = .8$
 $G = .8 \div .08$
 $G = 10$
- 2) $.08(10) + .59 = 1.39$
 $.8 + .59 = 1.39$
 $1.39 = 1.39$
- 3) $.3X + 2.4 = 2.58$
 $.3X = 2.58 - 2.4$
 $.3X = .18$
 $X = .18 \div .3$
 $X = .6$
- 4) $.3(.6) + 2.4 = 2.58$
 $.18 + 2.4 = 2.58$
 $2.58 = 2.58$

$$5) \quad \begin{array}{r} .72\frac{6}{7} \\ 7 \overline{) 5.10} \\ \underline{490} \\ 20 \\ \underline{14} \end{array}$$

$$6) \quad \begin{array}{r} 6.27\frac{1}{2} \\ 2 \overline{) 12.55} \\ \underline{1200} \\ 5 \\ \underline{4} \\ 15 \\ \underline{14} \end{array}$$

$$7) \quad \begin{array}{r} 1.56\frac{2}{8} = 1.56\frac{1}{4} \\ 8 \overline{) 12.50} \\ \underline{800} \\ 450 \\ \underline{400} \\ 50 \\ \underline{48} \end{array}$$

- 8) 6.5
- 9) .321
- 10) 62
- 11) $\frac{5}{2} \times \frac{5}{2} \times \frac{5}{2} = \frac{125}{8} = 15\frac{5}{8}$ cu. ft.
- 12) $.9 \times .9 \times .9 = .729$ cu. m
- 13) $4.8 \times 4.8 \times 4.8 = 110.592$ cu in
- 14) $1/2(6)(16) = 48$ sq. ft.
- 15) $10 + 10 + 16 = 36$ ft.
- 16) $1/2(3)(5.1) = 7.65$ sq. m
- 17) $4.5 + 5.1 + 3.3 = 12.9$ m
- 18) $3 \times 3 = 9$ sq. ft.
- 19) $12 \times 15 = 180$ sq. ft.
 $180 \div 9 = 20$ sq. yds.
- 20) $20 \times \$9.99 = \199.80

23A

- 1) done
- 2) $6 \div 7 = .85\frac{5}{7} = 85\frac{5}{7}\%$
- 3) $3 \div 10 = .30 = 30\%$
- 4) $2 \div 5 = .40 = 40\%$
- 5) $7 \div 8 = .87\frac{1}{2} = 87\frac{1}{2}\%$
- 6) $10 \div 11 = .90\frac{10}{11} = 90\frac{10}{11}\%$
- 7) $\frac{13}{15} = 13\frac{15}{15} = .86\frac{2}{3} = 86\frac{2}{3}\%$
- 8) $\frac{1}{6} = 1\frac{6}{6} = .16\frac{2}{3} = 16\frac{2}{3}\%$
- 9) $\frac{16}{50} = 16\frac{50}{50} = .32 = 32\%$
- 10) $50 - 16 = 34$ not wearing hats
 $\frac{34}{50} = 34\frac{50}{50} = .68 = 68\%$
 or $100\% - 32\% = 68\%$

23B

- 1) $7 \div 10 = .70 = 70\%$
- 2) $1 \div 2 = .50 = 50\%$
- 3) $4 \div 9 = .44\frac{4}{9} = 44\frac{4}{9}\%$
- 4) $3 \div 11 = .27\frac{3}{11} = 27\frac{3}{11}\%$
- 5) $3 \div 5 = .60 = 60\%$
- 6) $1 \div 12 = .08\frac{1}{3} = 8\frac{1}{3}\%$
- 7) $3 \div 4 = .75 = 75\%$
- 8) $5 \div 6 = .83\frac{1}{3} = 83\frac{1}{3}\%$
- 9) $25 - 3 = 22$ correct
 $22 \div 25 = .88 = 88\%$
- 10) $35 \div 100 = .35 = 35\%$

23C

- 1) $1 \div 7 = .14\frac{2}{7} = 14\frac{2}{7}\%$
- 2) $2 \div 9 = .22\frac{2}{9} = 22\frac{2}{9}\%$
- 3) $4 \div 5 = .80 = 80\%$
- 4) $5 \div 12 = .41\frac{2}{3} = 41\frac{2}{3}\%$
- 5) $2 \div 3 = .66\frac{2}{3} = 66\frac{2}{3}\%$
- 6) $3 \div 8 = .37\frac{1}{2} = 37\frac{1}{2}\%$
- 7) $87 \div 100 = .87 = 87\%$
- 8) $5 \div 8 = .62\frac{1}{2} = 62\frac{1}{2}\%$
- 9) $1 \div 3 = .33\frac{1}{3} = 33\frac{1}{3}\%$
- 10) $1 \div 2 = .50 = 50\%$

23D

- 1) $1 \div 4 = .25 = 25\%$
 2) $7 \div 9 = .77\overline{7} = 77\frac{7}{9}\%$
 3) $5 \div 16 = .31\frac{1}{4} = 31\frac{1}{4}\%$
 4) $1 \div 8 = .12\frac{1}{2} = 12\frac{1}{2}\%$
 5) $.17X + 1.2 = 1.234$
 $.17X = 1.234 - 1.2$
 $.17X = .034$
 $X = .034 \div .17$
 $X = .2$
 6) $.17(.2) + 1.2 = 1.234$
 $.034 + 1.2 = 1.234$
 $1.234 = 1.234$

7) $13 \overline{) 26.600} \approx 2.05$
 $\begin{array}{r} 26.600 \\ 26000 \\ \hline 600 \\ 520 \\ \hline 80 \\ 78 \\ \hline \end{array}$

8) $9 \overline{) 7.400} \approx .82$
 $\begin{array}{r} 7.400 \\ 7200 \\ \hline 200 \\ 180 \\ \hline 20 \\ 18 \\ \hline \end{array}$

- 9) $23 \overline{) 4570} \approx .20$
 $\begin{array}{r} 4570 \\ 2300 \\ \hline 2270 \\ 2070 \\ \hline 200 \\ 184 \\ \hline \end{array}$
 10) done
 11) $12 \times 4 \times 4.1 = 196.8$ cu. m
 12) $2.3 \times 1.8 \times 3.2 = 13.248$ cu. ft.
 13) $38 \div 45 = .84\frac{4}{9} = 84\frac{4}{9}\%$
 14) $6 \div 8 = .75 = 75\%$
 15) $4 \times 2 \times 2 = 16$ cu. mi.
 16) $12 \times 12 = 144$ sq. in.
 17) $10 \times 10 \times 144 = 14,400$ sq. in.
 18) $\$15.99 \times .40 = 6.396$ or
 $\$6.40$ off regular price

23E

- 1) $1 \div 9 = .11\frac{1}{9} = 11\frac{1}{9}\%$
 2) $2 \div 3 = .66\frac{2}{3} = 66\frac{2}{3}\%$
 3) $11 \div 14 = .78\frac{4}{7} = 78\frac{4}{7}\%$
 4) $4 \div 7 = .57\frac{1}{7} = 57\frac{1}{7}\%$
 5) $.3Y + .09 = 1.44$
 $.3Y = 1.44 - .09$
 $.3Y = 1.35$
 $Y = 1.35 \div .3$
 $Y = 4.5$
 6) $.3(4.5) + .09 = 1.44$
 $1.35 + .09 = 1.44$
 $1.44 = 1.44$

7) $11 \overline{) 98.000} \approx 8.90$
 $\begin{array}{r} 98.000 \\ 88000 \\ \hline 10000 \\ 9900 \\ \hline 100 \\ 99 \\ \hline \end{array}$

8) $6 \overline{) 77.9000} \approx 12.98\overline{3}$
 $\begin{array}{r} 77.9000 \\ 129833 \\ \hline 600000 \\ 170000 \\ \hline 120000 \\ 59000 \\ \hline 54000 \\ 5000 \\ \hline 4800 \\ 200 \\ \hline 180 \\ \hline \end{array}$

9) $48 \overline{) 5000.000} \approx 104.16\overline{6}$ or $104.1\overline{6}$
 $\begin{array}{r} 5000.000 \\ 4800000 \\ \hline 200000 \\ 192000 \\ \hline 8000 \\ 4800 \\ \hline 3200 \\ 2880 \\ \hline 320 \\ 288 \\ \hline \end{array}$

- 10) $7 \times 6 \times 5 = 210$ cu. in.
 11) $7.5 \times 2.4 \times 2 = 36$ cu. m
 12) $\frac{7}{2} \times \frac{9}{4} \times \frac{29}{8} = \frac{1827}{64} = 28\frac{35}{64}$ cu. ft.
 13) $102 + 60 = 162$ games total
 $102 \div 162 = .62\frac{26}{27} = 62\frac{26}{27}\%$
 14) $60 \div 162 = .37\frac{1}{27} = 37\frac{1}{27}\%$
 $37\frac{1}{27}\% + 62\frac{26}{27}\% = 99\frac{27}{27}\% = 100\%$
 15) $\$47.50 \times 1.08 = \51.30
 16) round pizza:
 $3.14(6^2) \approx 113$ sq. in.
 $\$5.65 \div 113 \approx \$.05$ per sq. in.
 rectangular pizza:
 $12 \times 24 = 288$ sq. in.
 $\$11.52 \div 288 = \$.04$ per sq. in.
 rectangular is better price
 17) $288 \div 144 = 2$ sq. ft.
 18) $\$4.20 \times .75 = \3.15
 19) $36 + 42 + 36 + 42 = 156$ in.
 20) $156 \div 12 = 13$ ft.