

16E

- 1) $A = 3.14(3.2)^2 = 32.1536 \text{ sq. cm}$
 $C = 2(3.14)(3.2) = 20.096 \text{ cm}$
- 2) $A = 3.14(2)^2 = 12.56 \text{ sq. m}$
 $C = 3.14(4) = 12.56 \text{ m}$
- 3) .01
- 4) 5
- 5) 20,000
- 6) .064
- 7) .058
- 8) .0001
- 9) $\frac{7}{2} \cdot \frac{13}{6} = \frac{7}{2} \times \frac{3}{2} \times \frac{13}{13} = \frac{21}{2} = 1\frac{8}{2}$
- 10) $\frac{21}{4} \cdot \frac{13}{4} = \frac{21}{4} \times \frac{4}{4} \times \frac{13}{13} = \frac{21}{1} = 1\frac{8}{13}$
- 11) $\frac{7}{8} \cdot \frac{1}{16} = \frac{7}{8} \times \frac{2}{2} \times \frac{1}{16} = \frac{14}{1} = 14$
- 12) $4 + 10 + 4 + 10 = 28 \text{ in.}$
- 13) $45 + 45 + 45 + 45 = 180 \text{ ft.}$
- 14) $2.3 + 1.2 + 2.3 + 1.2 = 7 \text{ m}$
- 15) $\$2,000 \times .23 = \460
- 16) $3.14(7)^2 = 153.86 \text{ sq. in.}$
round to 154 sq. in.
- 17) $50 + 75 + 50 + 75 = 250 \text{ m.}$
- 18) $250 \times \$12.35 = \$3,087.50$
- 19) 4 kl
- 20) $\frac{7}{2} \cdot \frac{1}{4} = \frac{7}{2} \times \frac{2}{2} \times \frac{1}{4} = \frac{14}{1} = 14$

16F

- 1) $A = 3.14(1)^2 = 3.14 \text{ sq. m}$
 $C = 2(3.14)(1) = 6.28 \text{ m}$
- 2) $A = 3.14(.5)^2 = .785 \text{ sq. km}$
 $C = 3.14(1) = 3.14 \text{ km}$
- 3) 1.7
- 4) .32
- 5) 5,000
- 6) .003
- 7) 36.08
- 8) 22.04
- 9) $\frac{57}{8} \cdot \frac{15}{4} = \frac{57}{8} \times \frac{15}{4} = \frac{19}{10} = 1\frac{9}{10}$
- 10) $\frac{17}{6} \cdot \frac{7}{6} = \frac{17}{6} \times \frac{7}{6} = \frac{17}{7} = 2\frac{3}{7}$
- 11) $\frac{5}{8} \cdot \frac{1}{4} = \frac{5}{8} \times \frac{1}{4} = \frac{5}{2} = 2\frac{1}{2}$
- 12) $6 + 2 + 6 + 2 = 16 \text{ m}$
- 13) $1.2 + 1.2 + 1.2 + 1.2 = 4.8 \text{ ft.}$
- 14) $17 + 10 + 17 + 10 = 54 \text{ in.}$
- 15) $\$10.95 \times 1.20 = \13.14
- 16) $3.14(15)^2 = 706.5 \text{ sq. in.}$
- 17) $\$20.50 + \$15.98 + 11.24 = \$47.72$
 $\$47.72 \times 1.06 = \50.58
- 18) $\frac{5}{2} \times \frac{3}{2} = \frac{15}{4} = 3\frac{3}{4} \text{ cups}$
- 19) $\frac{33}{4} \cdot \frac{3}{4} = \frac{33}{4} \times \frac{3}{4} = 11$
- 20) 100,000 mm; .1 km

17A

- 1) done
- 2) done
- 3)
$$\begin{array}{r} .587 \\ 6 \overline{) 3.522} \\ \underline{30} \\ 52 \\ \underline{48} \\ 42 \\ \underline{42} \end{array}$$
- 4) $6 \times .587 = 3.522$
- 5)
$$\begin{array}{r} 8.8 \\ 9 \overline{) 79.2} \\ \underline{72} \\ 72 \\ \underline{72} \end{array}$$
- 6) $9 \times 8.8 = 79.2$
- 7)
$$\begin{array}{r} .8 \\ 5 \overline{) 4.0} \\ \underline{40} \end{array}$$
- 8) $5 \times .8 = 4.0$
- 9)
$$\begin{array}{r} .004 \\ 2 \overline{) .008} \\ \underline{008} \end{array}$$
- 10) $2 \times .004 = .008$
- 11)
$$\begin{array}{r} .0125 \\ 4 \overline{) .0500} \\ \underline{4} \\ 10 \\ \underline{8} \\ 20 \end{array}$$
- 12) $4 \times .0125 = .05$
- 13) $3.6 \div 4 = .9 \text{ of a pie}$
- 14) $5 \div 8 = .625 \text{ pts}$
- 15) $\$.75 \div 5 = \$.15$

17B

- 1)
$$\begin{array}{r} 1.5 \\ 4 \overline{) 6.0} \\ \underline{4} \\ 20 \\ \underline{20} \end{array}$$
- 2) $4 \times 1.5 = 6$
- 3)
$$\begin{array}{r} .09 \\ 3 \overline{) .27} \\ \underline{27} \end{array}$$
- 4) $3 \times .09 = .27$
- 5)
$$\begin{array}{r} .006 \\ 7 \overline{) .042} \\ \underline{42} \end{array}$$
- 6) $7 \times .006 = .042$
- 7)
$$\begin{array}{r} .05 \\ 8 \overline{) .40} \\ \underline{40} \end{array}$$
- 8) $8 \times .05 = .4$
- 9)
$$\begin{array}{r} .203 \\ 6 \overline{) 1.218} \\ \underline{12} \\ 018 \\ \underline{18} \end{array}$$
- 10) $6 \times .203 = 1.218$
- 11)
$$\begin{array}{r} 42.8 \\ 2 \overline{) 85.6} \\ \underline{8} \\ 5 \\ \underline{4} \\ 16 \\ \underline{16} \end{array}$$
- 12) $2 \times 42.8 = 85.6$
- 13) $24.8 \div 2 = 12.4 \text{ pieces}$
12 pieces with .4 of a piece left over
- 14) $2.4 \times 3 = .8 \text{ bushels}$
- 15) $34.4 \times 4 = 137.6 \text{ qt. jars}$

17C

$$1) \quad 5 \overline{) .40} \\ \underline{40} \\ 0$$

2) $5 \times .08 = .40$

$$3) \quad 6 \overline{) .408} \\ \underline{36} \\ 48 \\ \underline{48} \\ 0$$

4) $6 \times .068 = .408$

$$5) \quad 8 \overline{) .064} \\ \underline{64} \\ 0$$

6) $8 \times .008 = .064$

$$7) \quad 4 \overline{) 1.2} \\ \underline{1.2} \\ 0$$

8) $4 \times .3 = 1.2$

$$9) \quad 6 \overline{) 3.0} \\ \underline{30} \\ 0$$

10) $6 \times .5 = 3.0$

$$11) \quad 9 \overline{) 3.12} \\ \underline{27} \\ 42 \\ \underline{36} \\ 60 \\ \underline{54} \\ 60 \\ \underline{54} \\ 60 \\ \underline{54} \\ 60 \\ \underline{54} \\ 60$$

12) $9 \times 3.12 = 28.08$

13) $345.5 \div 2 = 172.75 \text{ mi.}$

14) $125.1 \div 9 = 13.9 \text{ bushels}$

15) $\$24.90 \div 3 = \8.30

17D

$$1) \quad 7 \overline{) .14} \\ \underline{14} \\ 0$$

2) $7 \times .02 = .14$

$$3) \quad 3 \overline{) 1.2} \\ \underline{3.6} \\ 3.6 \\ \underline{3.6} \\ 0$$

4) $3 \times 1.2 = 3.6$

$$5) \quad 9 \overline{) .549} \\ \underline{54} \\ 9 \\ \underline{9} \\ 0$$

6) $9 \times .061 = .549$

$$7) \quad 8 \overline{) 5.000} \\ \underline{48} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0$$

8) $8 \times .625 = 5$

9) $3.14(2.5)^2 = 19.625 \text{ sq. mi.}$

10) $3.14(5) = 15.7 \text{ mi.}$

11) $.015$

12) $.005$

13) 160

14) done

15) $13 + 3 + 13 + 3 = 32 \text{ ft.}$

16) $7.2 + 4.1 + 7.2 + 4.1 = 22.6 \text{ m}$

17) $\$32.50 \div 2 = \16.25

18) $2\frac{6}{8} - \frac{5}{8} = 2\frac{1}{8}$

17E

$$1) \quad 4 \overline{) .008} \\ \underline{32} \\ 0$$

2) $4 \times .008 = .032$

$$3) \quad 6 \overline{) .30} \\ \underline{30} \\ 0$$

4) $6 \times .05 = .3 \text{ or } .30$

$$5) \quad 5 \overline{) 11.1} \\ \underline{55} \\ 5.5 \\ \underline{55} \\ 0$$

6) $5 \times 11.1 = 55.5$

$$7) \quad 2 \overline{) 10.30} \\ \underline{10} \\ 30 \\ \underline{20} \\ 10 \\ \underline{10} \\ 0$$

8) $2 \times .515 = 1.030$

9) $3.14(8)^2 = 200.96 \text{ sq. km}$

10) $2(3.14)(8) = 50.24 \text{ km}$

11) 1

12) $.003$

13) 2.5

14) $4 + 3.8 + 4 + 3.8 = 15.6 \text{ m}$

15) $25 + 9.1 + 25 + 9.1 = 68.2 \text{ in.}$

16) $.12 + .05 + .12 + .05 = .34 \text{ km}$

17) $\$15 \times .10 = \1.50

$\$15 - \$1.50 = \$13.50$

18) $\$13.50 \times 1.04 = \14.04

$\$15 - \$14.04 = \$0.96$

19) $5.7 \div 3 = 1.9 \text{ km}$

20) $10 - 2\frac{5}{8} = 9\frac{8}{8} - 2\frac{5}{8} = 7\frac{3}{8} \text{ lbs.}$

17F

$$1) \quad 1 \overline{) .001} \\ \underline{1} \\ 0$$

2) $1 \times .001 = .001$

$$3) \quad 7 \overline{) 2.24} \\ \underline{21} \\ 14 \\ \underline{14} \\ 0$$

4) $7 \times .32 = 2.24$

$$5) \quad 3 \overline{) .15} \\ \underline{15} \\ 0$$

6) $3 \times .05 = .15$

$$7) \quad 8 \overline{) 1.25} \\ \underline{8} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0$$

8) $8 \times .125 = 1.000$

9) $3.14(2)^2 = 12.56 \text{ sq. mi.}$

10) $2(3.14)(2) = 12.56 \text{ mi.}$

11) $.95$

12) 2

13) 40

14) $80 + 70 + 80 + 70 = 300 \text{ in.}$

15) $3.1 + 1.3 + 3.1 + 1.3 = 8.8 \text{ m}$

16) $5\frac{1}{2} + 3\frac{1}{2} + 5\frac{1}{2} + 3\frac{1}{2} = 18 \text{ in.}$

17) $5 \text{ km; } 500,000 \text{ cm}$

18) $\$5.76 - \$0.89 = \$4.87$

19) $\$38.40 \times 1.15 = \44.16

$\$44.16 \div 4 = \11.04

20) $5\frac{1}{2} - 2\frac{2}{3} = 5\frac{3}{6} - 2\frac{4}{6} =$

$4\frac{9}{6} - 2\frac{4}{6} = 2\frac{5}{6}$