

Unit 3 Review

- 1) Thirty-four and seventy-eight thousand two hundred sixty-six hundred thousandths
2) Two and sixty-seven hundred-thousandths

3) 23.056

4) 0.0035

5) 21.1

6) 5.23

7) -4.25

8) $32.1234 > 32.123$

9) $2.301 < 2.31$

10) $-25.34 < -25.304$

11) $-3 \frac{63}{100}$

12) $5 \frac{625}{1000}$

13) -34.568

14) -2.35

15) 2.3472

16) \$35

17) \$4.35

18) mixed sign - positive

$$\begin{array}{r} 34.786 \\ - 23.110 \\ \hline 11.676 \end{array}$$

11.676

19) same signs - negative

$$\begin{array}{r} 78.123 \\ + 34.270 \\ \hline 112.393 \end{array} \quad \boxed{-112.393}$$

20) same signs - negative

$$\begin{array}{r} 275.100 \\ + 43.213 \\ \hline 318.313 \end{array} \quad \boxed{-318.313}$$

21) $-25.75 - (-344.678) = -25.75 + 344.678$

mixed signs - positive

$$\begin{array}{r} 344.678 \\ - 25.750 \\ \hline 318.928 \end{array} \quad \boxed{318.928}$$

22) mixed signs - positive

$$\begin{array}{r} 8.375 \\ - 6.400 \\ \hline 1.975 \end{array} \quad \boxed{1.975}$$

23) mixed signs - negative

$$\begin{array}{r} 345.750 \\ - 34.345 \\ \hline 310.755 \end{array} \quad \boxed{-310.755}$$

24) \$34.44 - \$50.00 mixed signs - negative

$$\begin{array}{r} 49.90 \\ - 50.00 \\ \hline -10.10 \end{array} \quad \boxed{-\$15.56}$$

25) ~~negative~~ result is positive

$$\begin{array}{r} 23.45 \\ \times 3.2 \\ \hline 4690 \\ 7035 \\ \hline 75040 \end{array} \quad \boxed{75.040}$$

Unit 3 Review Continued

26) result is negative

$$\begin{array}{r} 2.324 \\ \times 5.5 \\ \hline 11620 \\ 11620 \\ \hline 127820 \end{array}$$

$$\boxed{-12.7820}$$

27) result is positive

$$\begin{array}{r} 2.54 \\ \times 3.7 \\ \hline 1778 \\ 762 \\ \hline 9398 \end{array}$$

$$\boxed{9.398}$$

28) -234560

29) -56.78

30) 0.003234

31) Circumference is

$$C = 2\pi r$$

$$C = 2\pi(3) \text{ m}$$

$$= 6\pi \text{ m}$$

$$C \approx 6(3.14) \text{ m}$$

$$\approx \boxed{18.84 \text{ m}}$$

$$\begin{array}{r} 2.12 \\ 15 \overline{) 31.80} \\ \underline{-30} \\ 18 \\ \underline{-15} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

$$\boxed{2.12}$$

$$\begin{array}{r} 32.125 \\ 12 \overline{) 385.500} \\ \underline{-36} \\ 25 \\ \underline{-24} \\ 15 \\ \underline{-12} \\ 30 \\ \underline{-24} \\ 60 \\ \underline{-60} \\ 0 \end{array}$$

$$\boxed{32.125}$$

$$\begin{array}{r} 4.166 \\ 6 \overline{) 25.000} \\ \underline{-24} \\ 10 \\ \underline{-6} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$$\boxed{4.166}$$

$$\begin{array}{r} 62.8 \\ 2 \overline{) 125.6} \\ \underline{-12} \\ 05 \\ \underline{-4} \\ 16 \end{array}$$

$$\boxed{62.8}$$

$$\begin{array}{r} 5.55 \\ 9 \overline{) 50.00} \\ \underline{-45} \\ 50 \\ \underline{-45} \\ 50 \\ \underline{-45} \\ 5 \end{array}$$

$$\boxed{5.55}$$

$$\begin{array}{r} 1236. \\ 121 \overline{) 149556.} \\ \underline{-121} \\ 285 \\ \underline{-242} \\ 435 \\ \underline{-363} \\ 726 \\ \underline{-726} \\ 0 \end{array}$$

$$\boxed{1236}$$

$$\begin{array}{r} 198.2608 \\ 23 \overline{) 4560.0000} \\ \underline{-23} \\ 286 \\ \underline{-207} \\ 190 \\ \underline{-184} \\ 60 \\ \underline{-46} \\ 140 \\ \underline{-138} \\ 20 \\ \underline{-20} \\ 0 \\ \underline{-0} \\ 184 \\ \underline{-16} \end{array}$$

Round

198.2608

$$\rightarrow \boxed{198.261}$$

$$\begin{array}{r} 3.2857 \\ 7 \overline{) 23.0000} \\ \underline{-21} \\ 20 \\ \underline{-14} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-35} \\ 50 \\ \underline{-49} \\ 1 \end{array}$$

Round

3.2857

$$\rightarrow \boxed{3.286}$$

$$\begin{array}{r} 6.0428 \\ 7 \overline{) 42.3000} \\ \underline{-42} \\ 03 \\ \underline{-0} \\ 30 \\ \underline{-28} \\ 20 \\ \underline{-14} \\ 60 \\ \underline{-56} \\ 4 \end{array}$$

Round

6.0428

$$\rightarrow \boxed{6.043}$$

$$\begin{array}{r} 0.777 \\ 9 \overline{) 7.000} \\ \underline{-63} \\ 70 \\ \underline{-63} \\ 70 \\ \underline{-63} \\ 7 \end{array}$$

$$\boxed{\frac{7}{9} = 0.777}$$

$$\begin{array}{r} .125 \\ 8 \overline{) 1.000} \\ \underline{-8} \\ 20 \\ \underline{-16} \\ 40 \end{array}$$

$$\boxed{\frac{1}{8} = 0.125}$$

Unit 3 Review Continued

43) $0.85 \frac{6}{7}$
 $0.850 < 0.857$

$$\begin{array}{r} .857 \\ 7 \overline{) 6.000} \\ \underline{-56} \\ 40 \\ \underline{-35} \\ 50 \\ \underline{49} \\ 1 \end{array}$$

44) $\frac{3}{8} 0.4$
 $0.375 < 0.4$

$$\begin{array}{r} .375 \\ 8 \overline{) 3.000} \\ \underline{-24} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

45) $(-2.1)^2 = (-2.1)(-2.1)$
 result is positive

$$\begin{array}{r} 2.1 \\ \times 2.1 \\ \hline 21 \\ 42 \\ \hline 4.41 \end{array}$$

4.41

46) $-1.2^2 = -(1.2)(1.2)$
 result is ~~positive~~ negative

$$\begin{array}{r} 1.2 \\ \times 1.2 \\ \hline 24 \\ 12 \\ \hline 1.44 \end{array}$$

-1.44

47) $-(0.4)^3 = -(0.4)(0.4)(0.4)$
 result is negative

$$\begin{array}{r} 0.4 \\ \times 0.4 \\ \hline 0.16 \end{array} \quad \begin{array}{r} 0.16 \\ \times 0.4 \\ \hline 0.064 \end{array}$$

-0.064

48) $2.1(0.2)^4 = 2.1(0.2)(0.2)(0.2)(0.2)$

$$\begin{array}{r} 2.1 \\ \times 0.2 \\ \hline 0.42 \end{array} \quad \begin{array}{r} 0.2 \\ \times 0.2 \\ \hline 0.04 \end{array}$$

$\rightarrow = (0.42)(0.04)(0.2)$

$$\begin{array}{r} 0.42 \\ \times 0.04 \\ \hline 0.0168 \end{array} \quad \begin{array}{r} 0.0168 \\ \times 0.2 \\ \hline 0.00336 \end{array}$$

0.00336

49) $3.1(-1.1)^3 = 3.1(-1.1)(-1.1)(-1.1)$ result is negative

$$\begin{array}{r} 3.1 \\ \times 1.1 \\ \hline 31 \\ 341 \end{array} \quad \begin{array}{r} 1.1 \\ \times 1.1 \\ \hline 11 \\ 121 \end{array}$$

$= (3.41)(1.21)$

$$\begin{array}{r} 3.41 \\ \times 1.21 \\ \hline 341 \\ 682 \\ \hline 41261 \end{array}$$

-4.1261

50) $2.3 + 1.2(0.2)$

$= 2.3 + 0.24$

$= \mathbf{2.54}$

Side work

$$\begin{array}{r} 1.2 \\ \times 0.2 \\ \hline 0.24 \\ + 2.30 \\ \hline 2.54 \end{array}$$

51) $3.6 \div 0.3 \cdot 2.12$
 $= 12 \cdot 2.12$

$$\begin{array}{r} 2.12 \\ \times 12 \\ \hline 424 \\ 212 \\ \hline 2544 \end{array}$$

25.44

Side work

$$\begin{array}{r} 12. \\ 3 \overline{) 36.0} \\ \underline{36} \\ 0 \end{array}$$

52) $2(0.2)^2 + 3.2(4.1)$

$= 2(0.04) + 3.2(4.1)$

$= 0.08 + 13.12$

$$\begin{array}{r} 13.12 \\ + 0.08 \\ \hline 13.20 \end{array}$$

13.20

Side work

$\rightarrow (0.2)^2 = (0.2)(0.2) = 0.04$

$$\begin{array}{r} 3.2 \\ \times 4.1 \\ \hline 32 \\ 128 \\ \hline 13.12 \end{array}$$

Unit 3 Review continued

$$53) \quad 3.25 \div 0.05 + 3.2 \cdot (1.25)$$

$$= 65 + 3.2 (1.25)$$

$$= 65 + 4$$

$$= \boxed{69}$$

Side work

$$\begin{array}{r} 65. \\ 5 \overline{) 325.0} \\ \underline{-30} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

$$\begin{array}{r} 1.25 \\ \times 3.2 \\ \hline 250 \\ 375 \\ \hline 4000 \end{array} \rightarrow 4.000$$

$$54) \quad \frac{77+75+70}{3} = \frac{222}{3}$$

Average is 74

$$\begin{array}{r} 74. \\ 3 \overline{) 222.0} \\ \underline{21} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

$$55) \quad \sqrt{36} = 6$$

$$56) \quad \sqrt{121} = 11$$

$$57) \quad -\sqrt{49} = -7$$