Master **Extra Practice Answers**

Extra Practice 1 – Master 3.21

Lesson 1
1.

o	t	h	th	Tth	Hth	m
3	4	7	1	5		
0	0	0	3	0	2	5
1	2	5	0	4	3	
0	0	0	5	3		

2. a) 3 ones   **b)** 3 thousandths
     c) 3 hundred-thousandths
     d) 3 ten-thousandths

3. a) 2.000 081 = 2 + 0.000 08 + 0.000 001
     b) 0.0435 = 0.04 + 0.003 + 0.0005
     c) 0.000 935 = 0.0009 + 000 03 + 0.000 005
     d) 0.012 78 = 0.01 + 0.002 + 0.0007 +
         0.000 08

4. a) 3.124   **b)** 15.006   **c)** 0.0007
     d) 0.000 013   **e)** 4.000 21   **f)** 0.0368

5. a) 1.4   **b)** 3.000 284   **c)** 1.234
     d) 5.002 941   **e)** 7.6024   **f)** 4.39

6. a) 3 hundredths + 4 ten-thousandths +
         8 hundred-thousandths =
         0.03 + 0.0004 + 0.000 08;
         three hundredths and forty-eight hundred-
         thousandths
     b) 6 ten-thousandths + 7 hundred-
         thousandths = 0.0006 + 0.000 07;
         sixty-seven hundred-thousandths

7. a) 5 ones are 1000 times as great as
         5 thousandths.
     b) 5 hundredths are 10 times as great as
         5 thousandths.
     c) 5 tenths are 1000 times as great as
         5 ten-thousandths.
     d) 5 hundredths are 100 times as great as
         5 ten-thousandths.

Extra Practice 2 – Master 3.22

Lesson 2
1. a) 30; underestimate
     b) 35; overestimate
     c) 90; underestimate
     d) 5; underestimate
     e) 10; overestimate
     f) 50; overestimate

2. a) About $24 (3 × $8)
     b) About $4 ($12 ÷ 3)

3. a) About 12 cm (3 cm × 4); underestimate
         because 3 cm < 3.2 cm
     b) About 16 cm (4 cm × 4); overestimate
         because 4 cm > 3.8 cm
     c) About 20 cm (5 cm × 4); underestimate
         because 5 cm < 5.4 cm

4. a) About 10 cm   **b)** About 5 cm
     c) About 15 cm

5. About $126; $18 × 7 = $126

6. a) I know 7 × 4 = 28. Since 7.26 is greater
         than 7, 7.26 × 4 is greater than 28.
     b) I know 42 ÷ 7 = 6. Since 41.16 is less
         than 42, 41.16 ÷ 7 is less than 6.

7. For example, I want to put a fence around
     the perimeter of a square garden and I want
     to be sure I have enough fencing.

Extra Practice 3 – Master 3.23

Lesson 3
1. a) 24.612   **b)** 18.42   **c)** 28.063
     d) 3.1812   **e)** 84.168   **f)** 36.324

2. a) 76.95   **b)** 7.71   **c)** 496.84

3. a) 35.28   **b)** 12.768   **c)** 102.054
     d) $138.80   **e)** 3.771   **f)** 2.944

4. $29.40

5. **a)** No, $4.35 × 8 = $34.80
   b) $35.65 – $34.80 = $0.85; Frank needs
       $0.85 more.

6. **a)** 3.984 is close to 4, and 4 × 3 = 12. Place
       the decimal point so the product is close
       to 12. As written, the product is close to
       120. Move the digits one place to the
       right: 11.952
   b) Correct; Since 73.26 is close to 70,
       multiply: 70 × 4 = 280. Place the decimal
       point so the product is close to 280. The
       product is correct because 293.04 is
       close to 280.
   c) 3.001 is close to 3, and 3 × 5 = 15. Place
       the decimal point so the product is close
       to 15. As written, the product is close to
       150. Move the digits one place to the
       right: 15.005
   d) 1.08 is close to 1, and 1 × 5 = 5. Place the
       decimal point so the product is close to 5.
       As written, the product is close to 0.5.
       Move the digits one place to the left: 5.4

Extra Practice 4 – Master 3.24

Lesson 4
1. **a)** 2.15   **b)** 0.13   **c)** 0.72

2.

	o	t	h	th	Tth
a)	0	0	5	6	
b)	0	1	6	4	
c)	0	1	0	4	5
d)	1	1	0	4	
e)	1	1	3	2	2
f)	0	1	4	7	3

3. **a)** 3.2, 0.32, 0.032
   b) 3.12, 0.312, 0.0312
   c) 0.162, 0.0162, 0.001 62

4. **a)** 1.624 m
   b) 6 cuts

5. **a)** 2.97; 495 × 6 = 2970; 0.495 is close to
       0.5, and 0.5 × 6 = 3. Place the decimal
       point so the product is close to 3.

   b) 0.0243; 0.0027 is about 3 thousandths,
       and 3 thousandths × 9 = 27 thousandths,

or 0.027. Place the decimal point so the
product is close to 0.027.
   c) 0.279; 0.093 is about 9 hundredths, and
       9 hundredths × 3 = 27 hundredths, or
       0.27. Place the decimal point so the
       product is close to 0.27.
   d) 5.18; 0.74 is about 7 tenths, and
       7 tenths × 7 = 49 tenths, or 4.9. Place the
       decimal point so the product is close
       to 4.9.
   e) 0.0424; 0.0053 is about 5 thousandths,
       and 5 thousandths × 8 = 40 thousandths,
       or 0.040. Place the decimal point so the
       product is close to 0.040.
   f) 0.445; 0.089 is about 9 hundredths, and
       9 hundredths × 5 = 45 hundredths, or
       0.45. Place the decimal point so the
       product is close to 0.45.

Extra Practice 5 – Master 3.25

Lesson 5
1. **a)** 0.51   **b)** 1.21   **c)** 0.39

2. **a)** 1.85   **b)** 2.04   **c)** 0.367
   d) 2.97   **e)** 1.147   **f)** 6.34

3. **a)** 1.157   **b)** 13.48   **c)** 0.916

4. **a)** 1.07 m   **b)** 4.38 cm

5. **a)** 8.12   **b)** 2.364   **c)** 0.328
   d) 1.214   **e)** 2.541   **f)** 6.56

6. Adam jogged 0.18 km in 1 min.
   Cecilia jogged 0.16 km in 1 min.
   Adam jogged farther in 1 min.

7. Cito paid $2.75 each hour.
   Alicia paid $2.95 each hour.
   So, Cito paid the lesser amount.

Extra Practice 6 – Master 3.26

Lesson 6
1. **a)** 0.79   **b)** 1.44   **c)** 22.3

2. **a)** Add a 0 in the dividend so we can
       continue to divide: 35 890 ÷ 2 = 17 945.
       Estimate to place the decimal point.
       3.589 is close to 4, and 4 ÷ 2 = 2.

Place the decimal point so the quotient is close to 2: 1.7945

b) Add a 0 in the dividend so we can continue to divide: 1820 ÷ 4 = 455. Estimate to place the decimal point. 18.2 is close to 20, and 20 ÷ 4 = 5. Place the decimal point so the quotient is close to 5: 4.55

c) Add a 0 in the dividend so we can continue to divide: 27 680 ÷ 5 = 5536. Estimate to place the decimal point. 2.768 is close to 2.5, and 2.5 ÷ 5 = 0.5. Place the decimal point so the quotient is close to 0.5: 0.5536

d) Add a 0 in the dividend so we can continue to divide: 14 070 ÷ 5 = 2814. Estimate to place the decimal point. 14.07 is close to 15, and 15 ÷ 5 = 3. Place the decimal point so the quotient is close to 3: 2.814

e) Add a 0 in the dividend so we can continue to divide: 49 770 ÷ 2 = 24 885. Estimate to place the decimal point. 49.77 is close to 50, and 50 ÷ 2 = 25. Place the decimal point so the quotient is close to 25: 24.885

f) Add a 0 in the dividend so we can continue to divide: 45 920 ÷ 4 = 11 480. Estimate to place the decimal point. 4.592 is close to 4, and 4 ÷ 4 = 1. Place the decimal point so the quotient is close to 1: 1.148

3. a) 1.595   **b)** 0.6   **c)** $1.03
d) 6.8   **e)** 2.55   **f)** 0.2

4. About 0.32 L

5. a) About $11.93
b) Approximate; the actual answer to part a is $11.9333 … but each person cannot pay this amount as the smallest denomination of money is the cent.
c) No, one person will have to pay one cent more than the others.

6. a) 176 ÷ 4 = 44. Estimate to place the decimal point. 1.76 is close to 2, and 2 ÷ 4 = $\frac{1}{2}$, or 0.5. Place the decimal point so the quotient is close to 0.5: 0.44. The quotient is correct.

b) 10 880 ÷ 5 = 2176. Estimate to place the decimal point. 10.88 is close to 10, and 10 ÷ 5 = 2. Place the decimal point so the quotient is close to 2: 2.176. Write the quotient to 2 decimal places (the closest hundredth): $2.18. Money is always written to 2 decimal places.

c) 1 846 000 ÷ 3 = 615 333 (the 3 continues to repeat). Estimate to place the decimal point. 18.46 is close to 18, and 18 ÷ 3 = 6. Place the decimal point so the quotient is close to 6: 6.153 33… Write the quotient to 2 decimal places (the closest hundredth): 6.15 L. The quotient must be given to the same number of decimal places as the dividend.

d) 9544 ÷ 4 = 2386. Estimate to place the decimal point. 9.544 is close to 8, and 8 ÷ 4 = 2. Place the decimal point so the quotient is close to 2: 2.386. The decimal point is in the wrong place. Move the digits one place to the right.

Extra Practice 7 – Master 3.27

Lesson 7

1. a) hundredths   **b)** thousandths
   c) millionths   **d)** ten-thousandths

2.

	o	t	h	Th	Tth
a)	0	0	8		
b)	0	0	0	6	
c)	0	0	0	2	
d)	0	0	0	7	
e)	0	0	9		
f)	0	0	0	0	7

3. a) 0.2, 0.02, 0.002
   b) 0.04, 0.004, 0.0004
   c) 0.015, 0.0015, 0.000 15

4. 0.081 m

5. This reasoning is not correct. 48 hundredths divided by 4 is 12 hundredths, or 0.12. When you divide 48 hundredths into 4 equal parts, each part cannot be greater than the dividend. Both the dividend and quotient must be changed in the same way (move the digits 2 places to the right).

6. a) The answer is incorrect because 0.843 is close to 1, and $1 \div 3 = \frac{1}{3}$, or about 0.3.
So, the quotient should be close to 0.3.

b) The student placed the decimal point in the wrong place.

c) 0.281. I can check by multiplying the quotient by the divisor: $0.281 \times 3 = 0.843$. Since 0.843 is the same as the dividend, my answer is correct.