



Please do NOT tear out pages!

Unit 4 Study Links Packet
Name _____

Students and Parents: Attached is the packet of Study Links for this math unit. Complete only the assigned Study Link for homework. The assigned Study Link will be noted in the planner of your go-home folder. Please do not take apart the packet.

Due Date:

Parent Initial:

- | | | |
|-------|-------|---|
| _____ | _____ | Study Link 4-1 Place-Value Puzzles |
| _____ | _____ | Study Link 4-2 Decimals All Around |
| _____ | _____ | *Study Link 4-3 Ordering Decimals |
| _____ | _____ | *Study Link 4-4 Railroad Tunnel Lengths |
| _____ | _____ | *Study Link 4-5 Addition and Subtraction of
Decimals |
| _____ | _____ | *Study Link 4-6 Rising Grocery Prices |
| _____ | _____ | Study Link 4-7 Tenths, Hundredths, Thousandths
*(Practice) |
| _____ | _____ | *Study Link 4-8 Measuring in Centimeters |
| _____ | _____ | Study Link 4-9 Metric Measurements *(Practice) |
| _____ | _____ | Study Link 4-10 Decimals and Metric Units
*(Practice) |

Parents : When the study link is done and you have gone over it with your child (answer key is in pink family letter), please initial the blank next to the completed link. When you see an * by the Study Link, this signals that concepts on the assignment are going to be assessed at the end of the unit. If there is an * by the Study Link number and your child struggled with the concepts on the Study Link, be sure to keep practicing the concepts in preparation for the unit assessment.

4th Grade Students - Be responsible. Once you get a parent's initials, put the packet (do not tear off sheets) in your go-home folder so it comes back to school the next day. The packet will be checked in as a classroom

Unit 4

Lessons 4.1, 4.2, 4.3, 4.4

- Write decimals between two consecutive numbers (ex: 3 and 4; 7 and 8)
- Order decimals

Lesson 4.3, 4.4, 4.5, 4.6, 4.7

- Order decimals
- Compare decimals using greater than or less than to make true number sentences
- Compare decimals to make a true number sentence.

Lesson 4.5, 4.6

- Add and subtract decimals
- Solve open sentences (ex: $n/8=3$)

Lesson 4.8, 4.9, 4.10

- Draw and measure objects to the nearest centimeter or $\frac{1}{2}$ centimeter
- Write factors and multiples; identify prime and composite numbers.

STUDY LINK
4•1

Place-Value Puzzles



Use the clues to write the digits in the boxes and find each number.

- Write 5 in the tens place.
 - Find $\frac{1}{2}$ of 24. Subtract 4. Write the result in the hundreds place.
 - Add 7 to the digit in the tens place. Divide by 2. Write the result in the thousands place.
 - In the ones place, write an even number greater than 2 that has not been used yet.

1,000s	100s	10s	1s

- Divide 15 by 3. Write the result in the hundredths place.
 - Multiply 2 by 10. Divide by 10. Write the result in the ones place.
 - Write a digit in the tenths place that is 4 more than the digit in the hundredths place.
 - Add 7 to the digit in the ones place. Write the result in the thousandths place.

100s	10s	1s	.	0.1s	0.01s	0.001s

- Write the result of 6×9 divided by 18 in the ones place.
 - Double 8. Divide by 4. Write the result in the thousandths place.
 - Add 3 to the digit in the thousandths place. Write the result in the tens place.
 - Write the same digit in the tenths and hundredths place so that the sum of all the digits is 14.

10s	1s	.	0.1s	0.01s	0.001s

Practice

Write true or false.

4. $6 \times 5 = 15 + 15$ _____ 5. $15 + 7 < 13 - 8$ _____ 6. $72 / 9 > 9$ _____

STUDY LINK
4•3

Ordering Decimals



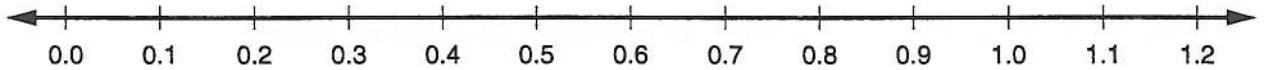
Mark the approximate locations of the decimals and fractions on the number lines below. Rename fractions as decimals as necessary.

1.



A 0.33 B 1.6 C 0.7 D 1.01
 E 1.99 F 1.33 G 0.1 H 0.8

2.



I 0.67 J 0.05 K $\frac{75}{100}$ L 0.49 M 0.99
 N 1.15 O $\frac{25}{100}$ P 0.101 Q 0.55 R 0.88

Use decimals. Write 3 numbers that are between the following:

3. \$5 and \$6 \$_____ \$_____ \$_____

4. 4 centimeters and 5 centimeters _____ cm _____ cm _____ cm

5. 21 seconds and 22 seconds _____ sec _____ sec _____ sec

6. 8 dimes and 9 dimes \$_____ \$_____ \$_____

7. 2.15 meters and 2.17 meters _____ m _____ m _____ m

8. 0.8 meter and 0.9 meter _____ m _____ m _____ m

Practice

9. $x + 17 = 23$ $x =$ _____ 10. $5 * n = 35$ $n =$ _____ 11. $32 / b = 4$ $b =$ _____

STUDY LINK
4•4

Railroad Tunnel Lengths



The table below shows the five longest railroad tunnels in the world.

Tunnel	Location	Year Completed	Length in Miles
Seikan	Japan	1988	33.46
Channel	France/England	1994	31.35
Moscow Metro	Russia	1979	19.07
London Underground	United Kingdom	1939	17.30
Dai-Shimizu	Japan	1982	13.98

Use estimation to answer the following questions.

1. Which two tunnels have a combined length of about 60 miles?

_____ and _____

2. Which of the following is closest to the combined length of all five tunnels?
Choose the best answer.

Less than 90 miles

Between 90 and 130 miles

Between 130 and 160 miles

More than 160 miles

3. Explain how you solved Problem 2.

4. About how many miles longer is the Channel Tunnel than the Moscow Metro Tunnel?

About _____ miles

Try This

5. The Cascade Tunnel in Washington State is the longest railroad tunnel in the United States. It is about $\frac{1}{4}$ the length of the Seikan. About how long is the Cascade Tunnel?

About _____ miles

Practice

6. $190 + b = 200$ $b =$ _____ 7. $g - 500 = 225$ $g =$ _____

Name _____

Date _____

Time _____

STUDY LINK
4•5**Addition and Subtraction of Decimals**

Add or subtract. Show your work.



1. $96.45 + 23.96 =$ _____

2. $1.06 + 0.4 =$ _____

3. $9.87 - 4.69 =$ _____

4. $0.4 - 0.37 =$ _____



Write $<$, $>$, or $=$ to make each statement true.

5. $2.78 + 9.1$ _____ $3.36 + 8.49$

6. $0.08 + 0.97$ _____ $1.04 + 0.03$

7. $13.62 - 4.9$ _____ $9.4 - 1.33$

8. $9.4 - 5.6$ _____ $8.3 - 4.7$

9. Name two 3-digit numbers whose sum is 6.54. _____ + _____ = 6.54

10. Name two 3-digit numbers whose difference is 1.52. _____ - _____ = 1.52

Practice

11. $13 = 7 + s$ $s =$ _____

12. $8 * g = 24$ $g =$ _____

13. $36 / p = 6$ $p =$ _____

14. $m / 9 = 8$ $m =$ _____

STUDY LINK
4•6**Rising Grocery Prices**

The table below shows some USDA grocery prices for the year 2000 and estimates of grocery prices for the year 2025.

Grocery Item	Price in 2000	Estimated Price in 2025
dozen eggs	\$1.02	\$1.78
loaf of white bread	\$0.88	\$3.31
pound of butter	\$2.72	\$7.36
gallon of milk	\$2.70	\$5.65

- How much more is each item predicted to cost in 2025?
 a. eggs _____ b. bread _____ c. butter _____ d. milk _____
- The year is 2000. You buy bread and butter. You hand the cashier a \$20 bill. How much change should you receive? _____
- The year is 2025. You buy eggs and milk. You hand the cashier a \$10 bill. How much change should you receive? _____
- The year is 2000. You buy all 4 items. What is the total cost? _____
- The year is 2025. You buy all 4 items. What is the total cost? _____
- If the predictions are correct, how much more will you pay in 2025 for the 4 items than you paid in 2000? _____
- Which item is expected to have the greatest price increase? _____

Explain your answer. _____

Practice

- List the first ten multiples of 3. _____, _____, _____, _____, _____, _____, _____, _____, _____, _____
- List the first ten multiples of 7. _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Name _____

Date _____

Time _____

STUDY LINK
4•7

Tenths, Hundredths, Thousandths



Complete the table. The big cube is the ONE.



Base-10 Blocks	Fraction Notation	Decimal Notation
1.		
2.		
3.		
4.		

Write each number in decimal notation.

5. $\frac{346}{1,000}$ _____

6. $\frac{92}{1,000}$ _____

7. $\frac{3}{1,000}$ _____

8. $2\frac{7}{10}$ _____

Write each of the following in decimal notation.

9. 536 thousandths _____

10. 23 hundredths _____

11. 7 and 8 thousandths _____

12. 4 tenths _____

Write < or >.

13. 0.407 _____ 0.074

14. 0.65 _____ 0.437

15. 0.672 _____ 0.7

16. 2.38 _____ 2.4

Practice

17. $6.05 + 1.24 =$ _____

18. _____ = $47.90 + 0.76$

19. _____ = $8.71 - 2.78$

20. $46.8 - 3.77 =$ _____

STUDY LINK
4•8

Measuring in Centimeters



Measure each line segment to the nearest centimeter. Record the measurement in centimeters and meters.



Example: _____

a. About 5 centimeters b. About 0.05 meter

1. _____

a. About _____ centimeters b. About _____ meter

2. _____

a. About _____ centimeters b. About _____ meter

3. _____

a. About _____ centimeters b. About _____ meter

4. _____

a. About _____ centimeters b. About _____ meter

5. _____

a. About _____ centimeters b. About _____ meter

6. _____

a. About _____ centimeters b. About _____ meter

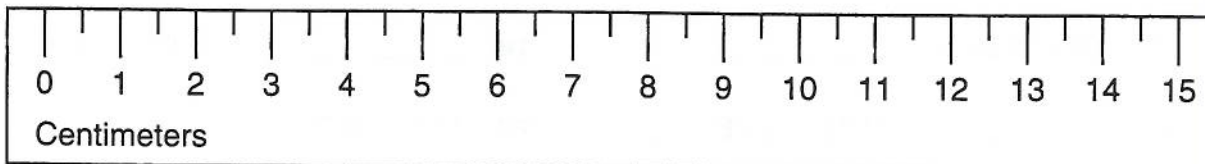
Practice

7. _____ = $10.06 + 10.04$

8. $38.93 + 92.4 =$ _____

9. $16.85 - 14.23 =$ _____

10. _____ = $20.9 - 8.57$



Name _____

Date _____

Time _____

STUDY LINK
4•9

Metric Measurements



1. Use your personal references to estimate the lengths of 4 objects in metric units. Then measure each object. Record your estimates and measurements.

Object	Estimated Length	Actual Length

Complete.

2. 18 cm = _____ mm

3. _____ cm = 40 mm

4. 3 m = _____ mm

5. 4 m = _____ cm

6. _____ m = 700 cm

7. 4.6 m = _____ cm

8. 7.94 m = _____ cm

9. _____ m = 450 cm

10. _____ m = 23 cm

11. 0.6 m = _____ cm

Measure each line segment to the nearest $\frac{1}{2}$ cm.

12. _____

About _____ centimeters

13. _____

About _____ centimeters

Practice

Insert < or >.

14. 0.68 _____ 0.32

15. 9.13 _____ 9.03

16. 0.65 _____ 0.6

STUDY LINK
4•10

Decimals and Metric Units



Symbols for Metric Units of Length

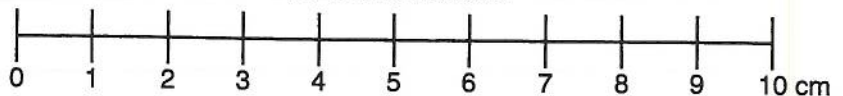
meter (m)
 centimeter (cm)
 decimeter (dm)
 millimeter (mm)

1 decimeter



$$1 \text{ m} = 10 \text{ dm} \quad 1 \text{ dm} = 0.1 \text{ m}$$

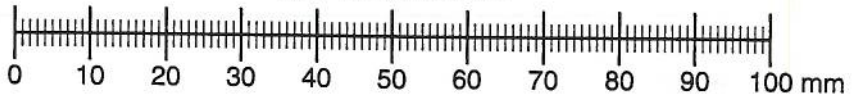
10 centimeters



$$1 \text{ m} = 100 \text{ cm} \quad 1 \text{ cm} = 0.01 \text{ m}$$

$$1 \text{ dm} = 10 \text{ cm} \quad 1 \text{ cm} = 0.1 \text{ dm}$$

100 millimeters



$$1 \text{ m} = 1,000 \text{ mm} \quad 1 \text{ mm} = 0.001 \text{ m}$$

$$1 \text{ dm} = 100 \text{ mm} \quad 1 \text{ mm} = 0.01 \text{ dm}$$

$$1 \text{ cm} = 10 \text{ mm} \quad 1 \text{ mm} = 0.1 \text{ cm}$$

Use your tape measure or ruler to help you fill in the answers below.

1. a. $4.2 \text{ cm} = \underline{42} \text{ mm}$ b. $64 \text{ mm} = \underline{6.4} \text{ cm}$ c. $2.6 \text{ m} = \underline{260} \text{ cm}$
2. a. $6.5 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ b. $26 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ c. $6.1 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$
3. a. $5 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ b. $30 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ c. $3 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$
4. a. $80 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ b. $110 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ c. $\underline{\hspace{2cm}} \text{ m} = 500 \text{ cm}$
5. a. $43 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ b. $98 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ c. $\underline{\hspace{2cm}} \text{ m} = 34 \text{ cm}$
6. a. $0.6 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ b. $4 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$ c. $5.2 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

Practice

7. 21, 49, and 56 are multiples of _____.
8. 45, 63, and 18 are multiples of _____.