



# ADA MERRITT K-8 CENTER

## 6TH GRADE MATHEMATICS SUMMER STUDY PACKET

**THE FOLLOWING STUDY GUIDE INCLUDES MATHEMATICS CONTENT THAT IS A PRE-REQUISITE FOR NEXT SCHOOL YEAR. YOU WILL RECEIVE CREDIT FOR THE COMPLETION OF THE PACKET SO MAKE SURE TO ATTACH ALL OF THE WORK NECESSARY TO ANSWER EACH PROBLEM.**

**STUDENT NAME:** \_\_\_\_\_

# Lesson 1 Skills Practice

## *Add and Subtract Decimals*

Find each sum or difference.

1.  $9.868 + 6.329$

2.  $0.87 + 6.12$

3.  $4.672 + 15.31$

4.  $4.609 + 2.81$

5.  $5.8 + 4.289$

6.  $1.09 + 0.65$

7.  $43.68 - 40.67$

8.  $9 - 5.2$

9.  $7 - 4.29$

10.  $38.94 - 8.25$

11.  $20.1 - 16.37$

12.  $9.8 - 3.24$

13. Gasoline prices are given to the nearest thousandth of a dollar. If a gallon of gasoline costs \$3.499 and increases \$0.09, what is the price of gasoline after the increase?
14. The area of Max's room, not including his closet, is 235.675 square feet. The area of his closet is 10.45 square feet. What is the area of his room, including the closet?

# Lesson 1 Problem-Solving Practice

## Add and Subtract Decimals

Solve.

|  |   |
|--|---|
| <p><b>1. MONEY</b> Last month, Shelly earned \$15.38 for mowing lawns, \$6.25 for cleaning her room, and \$12.04 for other chores. How much did she earn last month?</p>   | <p><b>2. BOOKS</b> Micah had \$10.52 after he left the bookstore. If he bought a book for \$6.39, how much money did he have before he went to the bookstore?</p>   |
| <p><b>3. FABRIC</b> Noah measured the length of three pieces of cloth. The measurements were 4.29 feet, 3.6 feet, and 2.34 feet. What was the total length of the three pieces of cloth?</p>   | <p><b>4. SNOW</b> Charlotte is happy because it has snowed in her town for three straight days. On Monday, it snowed 3.56 inches. On Tuesday, it snowed 4.359 more inches. On Wednesday, it snowed 3.07 more inches. What was the total snowfall over the three days?</p> |
| <p><b>5. MUSIC</b> During the first week of her vacation, Madison practices playing her flute 5.75 hours. In the following week, she spends 4.2 hours practicing the flute. What is the difference in the amount of time she spends practicing the flute during these weeks?</p> | <p><b>6. HIKING</b> Roberto hikes 21.48 miles on one weekend. The next weekend he hikes 30 miles. How much less is the distance he hiked on the first weekend than the distance he hiked on the second weekend?</p>   |
| <p><b>7. ELEVATION</b> Cheyenne lives on a mountain that is 576.54 feet above sea level. The mountain her grandmother lives on is 408.6 feet above sea level. What is the difference in the elevations of these mountains?</p>   | <p><b>8. GARAGE SALE</b> Clinton had his sister sell some of their toys at a garage sale. Clinton makes \$12.94 at the sale, and his sister makes \$20.18. How much less did Clinton make at the garage sale than his sister?</p>   |

# Lesson 3 Skills Practice

## *Multiply Decimals by Whole Numbers*

**Multiply.**

$$\begin{array}{r} 1. \ 1.5 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \ 0.9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \ 0.45 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \ 3.12 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \ 3.47 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \ 2.08 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \ 9.14 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \ 0.82 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \ 6.3 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \ 0.02 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \ 9.12 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \ 27.3 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \ 4.007 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \ 3.13 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \ 5.02 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 16. \ 6.31 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 17. \ 8.01 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 18. \ 4.325 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 19. \ 0.762 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 20. \ 0.08 \\ \times 8 \\ \hline \end{array}$$

$$21. \ 6 \times 3.04$$

$$22. \ 2.6 \times 9$$

$$23. \ 13 \times 2.5$$

$$24. \ 1.006 \times 4$$

# Lesson 3 Problem-Solving Practice

## Multiply Decimals by Whole Numbers

|   |  |             |              |             |         |             |  |
|---|--|-------------|--------------|-------------|---------|-------------|--|
| <p><b>1. COOKING</b> Norberto uses three 14.7-ounce cans of chicken broth when he makes his tortilla soup. How many total ounces of chicken broth does he use?</p>  | <p><b>2. TIME</b> Amanda works on a farm. It takes her 2.25 hours to drive to town and back. She usually goes to town twice a week to get supplies. How much time does Amanda spend driving if she takes 8 trips to town each month?</p> |             |              |             |         |             |  |
| <p><b>3. EXERCISE</b> The local health club is advertising a special for new members: no initiation fee to join and only \$34.50 per month for the first year. If Andy joins the health club for one year, how much will he spend on membership?</p>  | <p><b>4. BIKING</b> In order to train for a cross-state biking trip, Julie rides her bike 34.75 miles five times a week. How many total miles does she ride each week?</p>   |             |              |             |         |             |  |
| <p><b>5. MONEY</b> David is building a doghouse and needs bolts and washers from the hardware store. How much will David pay for 16 bolts that are 4 inches long and a washer for each?</p> <table border="1" data-bbox="168 1293 594 1423"> <tbody> <tr> <td>3-inch bolts</td> <td>\$0.87 each</td> </tr> <tr> <td>4-inch bolts</td> <td>\$0.92 each</td> </tr> <tr> <td>washers</td> <td>\$0.12 each</td> </tr> </tbody> </table> | 3-inch bolts   | \$0.87 each | 4-inch bolts | \$0.92 each | washers | \$0.12 each | <p><b>6. INSECTS</b> One wing of a Royal Moth is 0.75 inch across. How wide is the moth's wingspan when both wings are open?</p> |
| 3-inch bolts  | \$0.87 each  |             |              |             |         |             |  |
| 4-inch bolts  | \$0.92 each  |             |              |             |         |             |  |
| washers   | \$0.12 each  |             |              |             |         |             |  |
| <p><b>7. COSTUMES</b> K.J. is making costumes for this year's parade. The pattern she is using calls for 2.125 yards of fabric for each costume. How many yards of fabric will she need to make 34 costumes?</p>  | <p><b>8. POOL PASSES</b> The Girl Scouts are going to the pool. It will cost them \$2.50 per person to go and there are 10 people going. What will the total cost be?</p>  |             |              |             |         |             |  |

# Lesson 4 Skills Practice

## *Multiply Decimals by Decimals*

**Multiply.**

1.  $0.3 \times 0.5$

2.  $1.2 \times 2.1$

3.  $2.5 \times 6.7$

4.  $0.4 \times 8.3$

5.  $2.3 \times 1.21$

6.  $0.6 \times 0.91$

7.  $6.5 \times 0.04$

8.  $8.54 \times 3.27$

9.  $5.02 \times 1.07$

10.  $0.003 \times 2.9$

11.  $0.93 \times 6.8$

12.  $7.1 \times 0.004$

13.  $3.007 \times 6.1$

14.  $2.52 \times 0.15$

15.  $2.6 \times 5.46$

16.  $16.25 \times 1.3$

17.  $3.5 \times 24.09$

18.  $0.025 \times 17.1$

19.  $11.04 \times 6.18$

20.  $14.83 \times 16.7$

21.  $27.1 \times 10.15$

22.  $41.2 \times 10.34$

# Lesson 4 Problem-Solving Practice

## Multiply Decimals by Decimals

- 1. GIFTS** Colin is making soap for gifts. The table shows the cost of the scented oils needed to make each kind of soap. He needs 1.5 ounces of scented oil to make a batch of soap. If he wants to make 2 batches of lavender soap and 2 batches of vanilla soap, how much money will he need for the oils?

| Oil      | Cost             |
|----------|------------------|
| almond   | \$1.23 per ounce |
| lavender | \$1.54 per ounce |
| vanilla  | \$1.65 per ounce |
| melon    | \$1.12 per ounce |

- 2. GROCERY** Iona's favorite peaches are \$2.50 per pound at the local farmers' market. She bought 3.5 pounds of the peaches. How much did she spend?

- 3. SHOPPING** Jennifer is buying new school clothes. The items she wants to buy add up to \$132.50 before sales tax. Sales tax is calculated by multiplying the total amount by 0.08. What is the amount of sales tax for the items?

- 4. DRIVING** Ana bought a van that holds 20.75 gallons of gas and gets an average of 15.5 miles per gallon. How many miles can she expect to go on a full tank?

- 5. INCOME** Ishi makes \$8.50 an hour rolling sushi at a restaurant. His paycheck shows that he worked 20.88 hours over the past two weeks. How much did Ishi make before taxes?

- 6. TRAVEL** Manny is on vacation in France. He has rented a car to drive 233.3 kilometers from Paris to Brussels and wants to figure out the distance in miles. Since 1 kilometer is equal to about 0.62 mile, he needs to multiply the total kilometers by 0.62. About how many miles will Manny drive?

# Lesson 5 Skills Practice

## *Divide Multi-Digit Numbers*

Find each quotient.

1.  $940 \div 58$

2.  $861 \div 78$

3.  $891 \div 6$

4.  $390 \div 21$

5.  $539 \div 47$

6.  $975 \div 81$

7.  $324 \div 9$

8.  $9,395 \div 87$

9.  $3,409 \div 14$

10.  $4,532 \div 51$

11.  $628 \div 27$

12.  $829 \div 44$



# Lesson 5 Problem-Solving Practice

## Divide Multi-Digit Numbers

|  |  |
|--|--|
| <p><b>1. HOMEWORK</b> Lisa solved 448 math problems for homework over 28 days. If she solved the same number of problems each day, how many problems did she solve per day?</p>  | <p><b>2. CHARITY</b> Luis was in charge of collecting money for a group of charities. He collected \$979 for 11 charities. If the money was divided evenly, how much was given to each charity?</p>                                      |
| <p><b>3. MEALS</b> Sandra helped serve meals to 25 families. Each family received the same amount of food. If she served 275 pounds of food, how many pounds of food did each family receive?</p>                              | <p><b>4. SALARY</b> Joshua works for a computer company and receives an annual salary of \$38,480. He receives 26 equal pay checks during the year. How much does he receive in each pay check?</p>                                      |
| <p><b>5. FOOTBALL</b> The football team is raising money to have a new turf field installed. The cost of the turf field is \$48,780. The team has 18 months to raise the money. How much do they need to raise each month?</p> | <p><b>6. WINDOWS</b> A window washing company has a contract to wash 3,082 windows on a 23-story building. If there are the same number of windows on each floor, how many windows are there on each floor?</p>                          |
| <p><b>7. TRAVEL</b> Mr. Santiago has a flight from New York to Paris that covers a distance of 3,636 miles. If the plane travels at 520 miles per hour, about how long will it take to get to Paris?</p>                       | <p><b>8. DELIVERIES</b> Mr. Thomas is delivering bricks to a construction site. His truck holds 387 bricks at one time. The builder has ordered 2,800 bricks. How many trips will Mr. Thomas have to make to deliver all the bricks?</p> |

# Lesson 7 Skills Practice

## *Divide Decimals by Whole Numbers*

Divide. Round to the nearest tenth if necessary.

1.  $9.6 \div 3$

2.  $5.15 \div 5$

3.  $16.08 \div 2$

4.  $24.64 \div 7$

5.  $132.22 \div 11$

6.  $142.4 \div 16$

7.  $79.2 \div 9$

8.  $47.4 \div 15$

9.  $217.14 \div 21$

10.  $34.65 \div 5$

11.  $20.72 \div 8$

12.  $72.6 \div 10$

13.  $57.48 \div 15$

14.  $264.5 \div 25$

15.  $317.59 \div 34$

16.  $122.32 \div 11$

17.  $42.48 \div 18$

18.  $323.31 \div 24$

# Lesson 7 Problem-Solving Practice

## Divide Decimals by Whole Numbers

| <p><b>1. ENTERTAINMENT</b> Frank, Gina, Judy, and Connie are splitting their dinner bill. After tip, the total is \$30.08. How much does each owe if they split the bill four ways?</p>   | <p><b>2. FOOD</b> There are 25 servings in a 12.5-ounce bottle of olive oil. How many ounces are in a serving?</p>   |       |               |   |          |   |         |   |         |   |         |   |        |
|---|--|-------|---------------|---|----------|---|---------|---|---------|---|---------|---|--------|
| <p><b>3. RUNNING</b> Isabella has found that she stays the fittest by running various distances and terrains throughout the week. On Mondays she runs 2.5 miles, on Tuesdays 4.6 miles, on Thursdays 6.75 miles, and on Saturdays 4.8 miles. What is the average distance Isabella runs on each of the days that she runs? Round to the nearest hundredth of a mile. (<i>Hint:</i> To find the average, add the values and divide by the number of values.)</p> | <p><b>4. BUSINESS</b> Katherine spends \$1,089.72 each month for rent and supplies to run her hair salon. If she charges \$18 for a haircut, how many haircuts must Katherine do to cover her monthly expenses? Round to the nearest whole number.</p>   |       |               |   |          |   |         |   |         |   |         |   |        |
| <p><b>5. CONSTRUCTION</b> It took Steve and his construction crew 8 months to build a house. After expenses, he was left with \$24,872.67 for himself. On average, how much did Steve make per month? Round to the nearest dollar.</p>  | <p><b>6. GRADES</b> Shane wants to figure out what grade he is getting in math. His test scores were 85.6, 78.5, 92.5, 67, and 83.7. What was his average test score? What grade will he receive?</p> <table border="1" data-bbox="794 1495 1239 1787"> <thead> <tr> <th>Grade</th> <th>Average Score</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>90 – 100</td> </tr> <tr> <td>B</td> <td>80 – 89</td> </tr> <tr> <td>C</td> <td>70 – 79</td> </tr> <tr> <td>D</td> <td>60 – 69</td> </tr> <tr> <td>F</td> <td>0 – 59</td> </tr> </tbody> </table> | Grade | Average Score | A | 90 – 100 | B | 80 – 89 | C | 70 – 79 | D | 60 – 69 | F | 0 – 59 |
| Grade   | Average Score  |       |               |   |          |   |         |   |         |   |         |   |        |
| A   | 90 – 100   |       |               |   |          |   |         |   |         |   |         |   |        |
| B   | 80 – 89  |       |               |   |          |   |         |   |         |   |         |   |        |
| C   | 70 – 79  |       |               |   |          |   |         |   |         |   |         |   |        |
| D   | 60 – 69  |       |               |   |          |   |         |   |         |   |         |   |        |
| F   | 0 – 59   |       |               |   |          |   |         |   |         |   |         |   |        |

# Lesson 8 Skills Practice

## *Divide Decimals by Decimals*

Divide.

1.  $4.86 \div 0.2$

2.  $2.52 \div 0.7$

3.  $14.4 \div 1.2$

4.  $17.1 \div 3.8$

5.  $3.96 \div 1.32$

6.  $628.2 \div 34.9$

7.  $0.105 \div 0.5$

8.  $1.296 \div 0.16$

9.  $3.825 \div 2.5$

10.  $8.253 \div 0.5$

11.  $0.9944 \div 0.8$

12.  $1.638 \div 0.35$

13.  $13.59 \div 0.75$

14.  $4.4208 \div 1.8$

15.  $16.16 \div 0.2$

16.  $158.1 \div 5.1$

17.  $247.5 \div 3.3$

18.  $0.132 \div 1.1$