

Fourth Grade
Answer Key
Unit 3: More
Multiplication & Division

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Problem of the Day

Lesson 1

Solve the problem below.

$$\begin{array}{r} 67 \\ \times 39 \\ \hline \end{array}$$

Answer: 2,613

Lesson 2

Solve the problem below.

$$145 \div 5 = \underline{\hspace{2cm}}$$

Answer: 29

Lesson 3

Complete the table below and find the rule.

| INPUT | OUTPUT |
|-----------|-----------|
| 5 | 25 |
| 8 | 40 |
| <u>5</u> | 50 |
| 14 | <u>70</u> |
| <u>16</u> | 80 |

Rule:

$$\text{Input} \times 5 = \text{Output}$$

Lesson 4

Study the input/output table below to determine the rule.

| INPUT | OUTPUT |
|-------------|-------------|
| 4 | 16 |
| 6 | 24 |
| <u> </u> | 28 |
| 10 | <u> </u> |
| <u> </u> | 60 |

- A. Input \div 8 = Output
- B. Input \times 12 = Output
- C. Input \times 4 = Output**
- D. Input \div 6 = Output

Lesson 5

Which rule gives the number of balls in each bin?

| Number of Golf Balls | Number in Bin |
|----------------------|---------------|
| 18 | 6 |
| 24 | 8 |
| 30 | 10 |
| 36 | 12 |
| 45 | 15 |

- A. Number of golf balls \times 6 = number in bin
- B. Number of golf balls \div 3 = number in bin**
- C. Number of golf balls \times 2 = number in bin
- D. Number of golf balls \div 8 = number in bin

Problem of the Day

Lesson 6

Solve for p in the equation below.

$$2,100 \div p = 70$$

$$p = \underline{\quad 30 \quad}$$

Lesson 7

Solve for h in the equation below.

$$90 \times h = 8,100$$

$$h = \underline{\quad 90 \quad}$$

Lesson 8

Graham has 8 cases of soda. If there are 40 cans of soda in each case, solve for t , the total number of cans in all the cases.

$$t = \underline{\quad 320 \text{ cans of soda} \quad}$$

Lesson 9

Parker has 15 pairs of shoes in his closet. Mike has twice as many pairs of shoes as Parker. Draw a strip diagram to model this situation and find how many pairs of shoes Mike has.

Answer: 30 pairs of shoes

Lesson 10

Adriana's school recycled 547 newspapers each week for 3 weeks. How many newspapers did Ariana's school recycle? Draw a strip diagram to model and solve the problem.

Answer: 1,641

Problem of the Day

Lesson 11

Bill collected 32 feathers at the park. He put the feathers into four equal piles. How many feathers are in each pile? Draw a strip diagram to model and solve.

Answer: 8 feathers

Lesson 12

Dylan collected 320 stamps. He is putting them in an album. If Dylan can put 8 stamps on a page, how many pages in his album will be full?

Answer: 40 pages

Lesson 13

Wylie purchased 14 cans of worms for fishing. Each can contains 85 worms. If Wylie uses 345 of the worms, how many worms does he have remaining?

Answer: 845 worms

Lesson 14

Ava earned \$455 babysitting. If she spends \$200 and then splits the remaining money among 5 charities, how much money will each charity receive?

Answer: \$51

Lesson 15

Becca's school collected cans for 4 weeks. Each week the school collected 350 cans. How many cans did the school collect in all?

Answer: 1,400

Problem of the Day

Lesson 16

Jane purchased 205 balloons. Roger purchased 143 more balloons than Jane. How many balloons do Jane and Roger have altogether?

Answer: 553 ballons

Lesson 17

Trevor purchased 18 packs of batteries. Each pack contained 20 batteries. If Trevor used 125 of the batteries, how many batteries does he have left?

Answer: 235 batteries

Lesson 18

Carlos bought 25 comic books. Drew bought twice as many comic books as Carlos. Aiden has 121 more comic books than Drew. How many comic books does Aiden have?

Answer: 171 comic books

Lesson 19

Mrs. Sanchez has to put 300 books on shelves. If 7 books will fit on each shelf, how many shelves will Mrs. Sanchez need to hold all her books?

Meaning of the remainder:

Answer: 43 shelves

Lesson 20

Jessica purchased 150 charms to make necklaces. If she uses 7 charms for each necklace, how many necklaces will Jessica be able to make?

Meaning of the remainder:

Answer: 21 necklaces

Pre-Assessment

1. Solve for n in the equation.

$$2,400 \div n = 8$$

$$n = \underline{\quad 300 \quad}$$

2. Luis purchased 25 dozen cases of water. Each case cost \$3. How much money did Luis spend on the cases of water?

$$\text{Answer: } \underline{\quad \$75 \quad}$$

3. Megan purchased a pack of 300 cotton balls. She needs 7 cotton balls for each craft that she makes. How many crafts will Megan be able to create?

$$\text{Answer: } \underline{\quad 42 \text{ crafts} \quad}$$

4. Examine the input/output table below and determine the rule.

| INPUT | OUTPUT |
|-------|--------|
| 60 | 12 |
| 45 | 9 |
| 30 | 6 |
| 20 | 4 |

- A. Input $\times 5 =$ Output
 B. Input $\div 4 =$ Output
C. Input $\div 5 =$ Output
 D. Input $\times 4 =$ Output

5. Angelique earned \$200. She bought 4 new bracelets for \$35 each. How much money does Angelique have left?

| | | | | |
|-------|------|------|------|-----|
| \$200 | | | | |
| \$35 | \$35 | \$35 | \$35 | g |

Which equation can be used to find g , the amount of money Angelique has remaining?

- A. $200 - (35 \times 4) = g$**
 B. $35 - (200 \div 4) = g$
 C. $4 - (200 \times 35) = g$
 D. $200 - (35 \div 4) = g$

Input/Output Pairs

Find the rule.

- Determine if the output number is smaller or larger than the input number. larger
- What operation allows you to get the answer? multiplication
- Always start with the easiest operation.
Try addition
- What plus 4 equals 16? 12
- Does 6 plus 12 equal 24? no
- Now try multiplication.
- What times 4 equals 16? 4
- Does 6 times 4 equal 24? yes
- Try the rest of the table.
- Solve for the empty outputs.
- State the rule: Input \times 4 = Output

| INPUT | OUTPUT |
|-----------|-----------|
| 4 | 16 |
| 6 | 24 |
| 8 | <u>32</u> |
| <u>10</u> | 40 |
| 12 | <u>48</u> |

Find the rule.

- Smaller or larger? larger
- Type of operation? multiplication
- Try it.
- Does it work? yes
- Now try 6 \times 8
- Does it work? yes
- Fill in the table blanks.
- State the rule: Input \times 8 = Output

| INPUT | OUTPUT |
|-----------|-----------|
| 4 | 32 |
| 6 | 48 |
| 7 | <u>56</u> |
| <u>11</u> | 88 |
| 12 | <u>96</u> |

More Input/Output Pairs

Find the rule.

- Determine if the output number is smaller or larger than the input number. smaller
- What operation allows you to get the answer?
subtraction
- Always start with the easiest operation.
Try subtraction
- What minus 40 equals 10? 30
- Does 32 minus 30 equal 8? no
- Now try division.
- 40 divided by 10 equals what? 4
- Does 32 divided by 4 equal 8? yes
- Try the rest of the table.
- Solve for the empty outputs.
- State the rule: Input \div 4 = Output

| INPUT | OUTPUT |
|-----------|----------|
| 40 | 10 |
| 32 | 8 |
| <u>24</u> | 6 |
| 16 | <u>4</u> |
| <u>4</u> | 1 |

Find the rule.

- Smaller or larger? smaller
- Type of operation? division
- Try it.
- Does it work? yes
- Now try $20 \div 2 = 10$
- Does it work? yes
- Fill in the table blanks.
- State the rule: Input \div 2 = Output

| INPUT | OUTPUT |
|----------|----------|
| 20 | 10 |
| 16 | 8 |
| 10 | <u>5</u> |
| <u>8</u> | 4 |
| 2 | <u>1</u> |

Find the Unknown

Examine the equation below.

$$3,200 \div n = 8.$$

What do you notice?

**Sample answer: 3,200
can also be divided by 8
to solve the for n .**

What are some ways to solve for the unknown?

**Sample answer: I can use
a fact family to figure out
what n equals.**

Solve for the unknown.

400

Input/Output and Expressions Quiz

Read each problem below and solve.

1. Jade went to the ice cream shop. The table below shows the cost for each number of scoops. What is the rule?

| Number of Scoops | Cost |
|------------------|------|
| 1 | \$3 |
| 2 | \$6 |
| 4 | \$12 |
| 5 | \$15 |

- A. Number of scoops \times 2 = Cost
 B. Number of scoops \div 3 = Cost
C. Number of scoops \times 3 = Cost
 D. Number of scoops \div 2 = Cost

2. The table below shows the relationship between values of the input and output. What is the rule?

| Input | Output |
|-------|--------|
| 63 | 9 |
| 49 | 7 |
| 42 | 6 |
| 21 | 3 |

- A. Input \div 3 = Output
 B. Input \times 7 = Output
 C. Input \times 3 = Output
D. Input \div 7 = Output

Solve for the unknowns below.

3. $4,500 \div n = 50$
 $n = \underline{900}$

4. $t \times 400 = 1,600$
 $t = \underline{4}$

5. $7,200 \div u = 900$
 $u = \underline{8}$

6. $11 \times h = 5,500$
 $h = \underline{500}$

7. $1,200 \div a = 6$
 $a = \underline{200}$

8. $w \times 300 = 1,800$
 $w = \underline{6}$

9. Brandon went shopping and purchased 5 shirts. If each shirt cost \$35, what is n , the total amount of money he spent on the shirts?

$n: \underline{\$175}$

10. Lily went to the market and bought 36 apples. If she was able to fit 6 apples in a bag, what is y , the number of bags that Lily needed to hold all the apples?

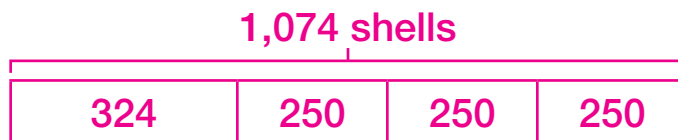
$y: \underline{6 \text{ bags}}$

Multiplication Strip Diagrams

Dominic took 248 pictures on his vacation. Trevor took three times as many pictures. How many pictures did Trevor take? Draw a strip diagram to model the problem and solve.

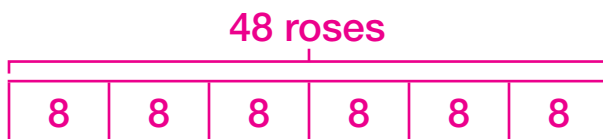


Gabriela collected 324 shells in one day on her vacation. Tiffany collected 250 shells each day for three days on her vacation. How many shells did Gabriela and Tiffany collect altogether? Draw a strip diagram to model the problem and solve.



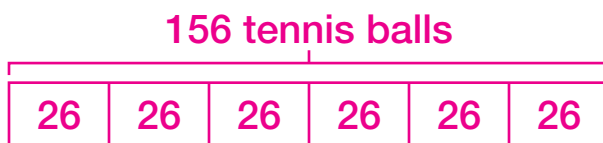
Division Strip Diagrams

Emily has 48 roses and wants to put 8 roses in each vase. How many vases will Emily need? Draw a strip diagram to model the problem and solve.



Emily needs 6 vases.

Sarah is putting 13 dozen tennis balls into 6 cases. She puts the same number of tennis balls in each case. How many tennis balls will Sarah put into each case? Draw a strip diagram to model the problem and solve.



Sarah will put 26 tennis balls into each case.

Multi-Step Word Problem Quiz

Read each problem below and solve.

- Ridge Trail Elementary ordered 13 dozen breakfast tacos for their teachers. If there were 3 different types of tacos and there were the same number of each type, how many of each taco type was ordered?
- Makayla purchased 4 packs of 300 sheets of notebook paper. She gave 150 sheets to her brother and another 150 sheets to her sister. How many sheets of notebook paper does Makayla have left for herself?

- 50 of each taco type
- 52 of each taco type
- 54 of each taco type
- 56 of each taco type

- 1,200 sheets of notebook paper
- 1,050 sheets of notebook paper
- 1,000 sheets of notebook paper
- 900 sheets of notebook paper

- Rachel has 124 cupcakes. She puts 17 cupcakes on each of 4 display tables. How many cupcakes does Rachel have left over?

| | | | | |
|--|--|--|--|-----|
| | | | | |
| | | | | m |

Which equation can be used to find m , the number of cupcakes that Rachel has remaining?

- $124 + (17 \times 4) = m$
- $124 - (17 \div 4) = m$
- $124 + (17 \div 4) = m$
- $124 - (17 \times 4) = m$

- Wes collected 60 cans each day for 5 days. Jonathan collected 100 cans each day for 3 days. How many cans, q , did the boys collect in all?

| | | | | |
|--|--|--|--|--|
| | | | | |
| | | | | |

Which equation can be used to find q , the number cans that Wes and Jonathan collected?

- $(60 \times 3) + (100 \times 5) = q$
- $(100 \times 60) \div 8 = q$
- $(60 \times 5) - (100 \times 3) = q$
- $(60 \times 5) + (100 \times 3) = q$

All Operations Word Problem Quiz

Read each problem below and solve.

1. Josh made 98 dozen donuts each hour for 5 hours. If he sold 547 of the donuts, how many donuts remain?

A. 532 donuts
B. 629 donuts
 C. 739 donuts
 D. 1,176 donuts

3. Maggie earned \$325 planting her neighbor's garden. If she spent \$36 each on 5 shirts, how much money does Maggie have left?

| | | | | | |
|--|--|--|--|--|-----|
| | | | | | |
| | | | | | k |

Which equation can be used to find k , the amount of money Maggie has left?

- A. $325 - (36 \times 5) = k$
 B. $325 + (36 \div 5) = k$
 C. $325 - (36 \div 5) = k$
 D. $325 + (36 \times 5) = k$
5. Molly has 345 pages left to read in her book. If she has already read 121 pages and it takes her 2 minutes to read each page, how many minutes will it take Molly to finish her book? Record your answer below.

Answer: 448 minutes

2. Cameron wanted to plant 700 pumpkin seeds in his garden. If he planted 56 rows of 10 seeds each, how many seeds does he have left to plant?

A. 560 seeds
 B. 340 seeds
C. 140 seeds
 D. 98 seeds

4. Oil Tire Co. received a shipment of 20 dozen tires. Of those, 135 tires were sold that day. How many tires, q , remain?

| | |
|--|-----|
| | |
| | q |

Which equation can be used to find q , the number of tires remaining?

- A. $(20 + 12) + (135 + 12) = q$
 B. $(20 \times 12) + 135 = q$
C. $(20 \times 12) - 135 = q$
 D. $135 + (20 + 12) = q$
6. Marco bought 7 packages of batteries. Each package contained 124 batteries. If Marco sorted the batteries equally into 2 drawers, how many batteries did he put in each drawer? Draw a strip diagram to model the problem and solve.

Answer: 434 batteries

Interpreting Remainders of 0

Solve each problem below and determine the meaning of the remainder.

1. Gina has 466 beads to make bracelets. She needs 8 beads to make each bracelet. How many bracelets can Gina make?

58 bracelets

Meaning of the remainder:

Gina has 2 extra beads remaining.

2. Dominic earned \$100 doing yard work. If he is going to split the money equally among 3 charities, how much money will he give to each charity?

\$33

Meaning of the remainder:

Dominic has \$1 remaining.

3. Victoria purchased 800 charms from the store. She wants to make necklaces that require 9 charms each. How many necklaces can Victoria make?

88 necklaces

Meaning of the remainder:

Victoria has 8 charms left over.

4. Kayden wanted to give his superhero figurines to his 3 brothers. If he has 128 superhero figurines, how many figurines can he give to each brother so they each get the same number?

32 figurines

Meaning of the remainder:

Kayden and his brothers can share the figurines equally.

Interpreting Remainders of 1

Solve each problem below and determine the meaning of the remainder.

1. The Ocean Kayak Park is expecting 225 people. If each kayak holds 8 people, how many kayaks should they prepare so that everyone can go on the kayak tour together?

29 kayaks

Meaning of the remainder:

The remainder is 1 which means they need 29 boats instead of 28.

2. Drew had 145 soccer balls to sort into bins. If each bin can hold 9 soccer balls, how many bins will Drew need to hold all the soccer balls?

17 bins

Meaning of the remainder:

The remainder is 1 which means Drew needs 17 bins instead of 26.

3. Pine Elementary has 118 students to take on a field trip. Students must be in groups of 8. How many groups will the students be split into for the field trip?

15 groups

Meaning of the remainder:

The remainder is 0.75 which means they need 15 groups instead of 14.

4. Marshall Elementary has 1,328 books in the library. If 9 books fit on each shelf, how many shelves does the library need to hold all the books?

148 shelves

Meaning of the remainder:

The remainder is 0.55 which means they need 148 shelves instead of 147.

Interpreting the Remainder Quiz

Read each problem below and solve.

1. Mrs. Roberts purchased 350 pencils at the store. She can put 8 pencils in each jar. How many jars will Mrs. Roberts need to hold all the pencils?

Meaning of the remainder:

Sample answer: There is a remainder of 7 which means Mrs. Roberts needs 44 jars instead of 43.

Answer: 44 jars

2. Kendall earned \$205. She wants to split the money equally between 2 charities. How much money will each charity receive?

Meaning of the remainder:

Sample answer: There is a remainder of 5 leftover.

Answer: \$102

3. Roxy bought a bead kit of 500 beads. She makes necklaces with 8 beads each. How many necklaces will Roxy be able to make?

Meaning of the remainder:

Sample answer: There is a remainder of 5 beads leftover.

Answer: 62 necklaces

Assessment

Read and solve each problem.

1. Tracey works at a florist shop where each bouquet contains 11 flowers. Which table shows the number of flowers in 3, 6, 7, and 12 bouquets?

A.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 3 | 33 |
| 6 | 65 |
| 7 | 77 |
| 12 | 121 |

B.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 3 | 33 |
| 6 | 65 |
| 7 | 77 |
| 12 | 132 |

C.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 3 | 33 |
| 6 | 65 |
| 7 | 70 |
| 12 | 132 |

D.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 3 | 33 |
| 6 | 66 |
| 7 | 77 |
| 12 | 121 |

2. Madison went to the candy shop. The table below shows the cost of the candy purchased. What is the rule?

| Number of Pounds | Cost |
|------------------|------|
| 2 | \$8 |
| 4 | \$16 |
| 5 | \$20 |
| 8 | \$32 |

- A.** Number of pounds \times 4 = Cost
B. Number of pounds \div 3 = Cost
C. Number of pounds \times 3 = Cost
D. Number of pounds \div 4 = Cost

3. The table below shows the relationship between values of the input/output. What is the rule?

| Input | Output |
|-------|--------|
| 60 | 10 |
| 54 | 9 |
| 36 | 6 |
| 24 | 4 |

- A.** Input \div 6 = Output
B. Input \times 7 = Output
C. Input \times 6 = Output
D. Input \div 7 = Output

Solve the unknown expressions below.

4. $3,600 \div m = 6$
 $m = \underline{600}$

5. $5 \times c = 450$
 $c = \underline{90}$

6. $2,400 \div n = 60$
 $n = \underline{40}$

7. $400 \times b = 1,600$
 $b = \underline{4}$

8. Steven went shopping with \$500. He spent \$225 on a winter coat and bought two shirts that cost \$35 each. How much money does Steven have left?
- A. \$255
 - B. \$245
 - C. \$215
 - D. \$205
9. Josie bought 45 dozen seeds to plant. She planted 23 dozen seeds. How many seeds does Josie have left to plant?
- A. 267 seeds
 - B. 246 seeds
 - C. 264 seeds
 - D. 276 seeds

10. Mr. Tim has 450 markers. He sorts the markers into packs of 8. How many packs will Mr. Tim be able to make by sorting all of his markers?

56 packs of markers

Meaning of the remainder:

Sample answer: Mr. Tim will have 2 markers leftover.

11. Randy purchased 300 beads to make necklaces. If each necklace takes 8 beads, how many necklaces will Randy be able to make?

37 necklaces

Meaning of the remainder:

Sample answer: There is a remainder of .8 which means Randy cannot make 38 necklaces.

12. Whitney bought packs of pencils for the art room. The table below shows the number of pencils in the packs. What is the rule?

| | | | | |
|--------------------------|----|----|----|-----|
| Number of Pencils | 20 | 30 | 60 | 110 |
| Number of Packs | 2 | 3 | 6 | 11 |

- A. number of packs \times 10 = number of pencils
B. number of pencils \times 11 = number of packs
C. number of pencils \times 10 = number of packs
D. number of packs \times 11 = number of pencils
13. Holland earned \$400 babysitting. If she spent all of her money on 8 shirts that were all the same price, how much did each shirt cost? Draw a strip diagram and solve the problem.

Strip Diagram

Answer: **\$50**

14. Gerry purchased two boxes of animal crackers. Each box contains 43 crackers. Gerry gives 24 crackers to her sister, 15 crackers to her brother, and keeps the rest. How many crackers did she keep? Draw a strip diagram to model the problem and solve.

Strip Diagram

Answer: **47 crackers**

15. Josh bought 14 dozen eggs from the store. When he got home, he realized that 32 eggs were cracked. How many eggs does Josh have left after he removes the cracked eggs?

Answer: 136 eggs

16. Laura has 123 dolls. Darla has twice as many dolls as Laura. How many dolls do the girls have altogether?

Answer: 369 dolls

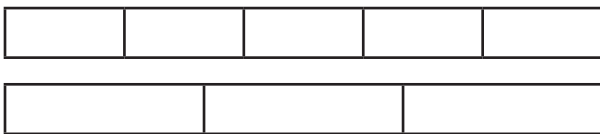
17. Mark baked 35 dozen brownies for a bake sale. He sold 382 brownies. How many brownies does he have left?

- A. 48 brownies
- B. 347 brownies
- C. 38 brownies**
- D. 118 brownies

18. Justin won 240 tickets at the local arcade. Raquel won 125 tickets at the arcade. If they put their tickets together and bought a prize for 315 tickets, how many tickets do they have left to spend?

- A. 45 tickets
- B. 50 tickets**
- C. 65 tickets
- D. 55 tickets

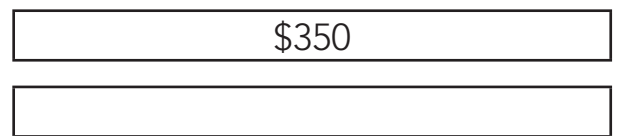
19. Sally's school collected 250 cans each week for 5 weeks. Jax's school collected 299 cans each week for 3 weeks.



Which equation can be used to find g , the total number of cans collected by both schools?

- A. $(250 \times 5) + 299 = g$
- B. $(250 \times 3) + (299 \times 5) = g$
- C. $(250 \times 5) + (299 \times 3) = g$**
- D. $350 - 299 = g$

20. Carl earned \$350. He bought 5 new video games for \$40 each. How much money does Carl have left?



Which equation can be used to find m , the amount of money that Carl has remaining?

- A. $350 - (40 \times 5) = m$**
- B. $350 + (350 \div 5) = m$
- C. $350 - 40 = m$
- D. $350 - (40 \div 5) = m$

| INPUT | OUTPUT |
|-----------|-----------|
| 3 | 9 |
| 6 | 18 |
| 9 | <u>27</u> |
| <u>11</u> | 33 |
| 12 | <u>36</u> |

Rule:

Input \times 3 = Output

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Input/Output Cards, Set 1

| INPUT | OUTPUT |
|-----------|-----------|
| 4 | 36 |
| 6 | 54 |
| <u>8</u> | 72 |
| 9 | <u>81</u> |
| <u>12</u> | 108 |

Rule:

Input \times 9 = Output

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Input/Output Cards, Set 1

| INPUT | OUTPUT |
|-----------|------------|
| 4 | 40 |
| 5 | 50 |
| <u>7</u> | 70 |
| 11 | <u>110</u> |
| <u>12</u> | 120 |

Rule:

Input \times 10 = Output

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Input/Output Cards, Set 1

| INPUT | OUTPUT |
|-----------|-----------|
| 2 | 10 |
| 6 | 30 |
| <u>9</u> | 45 |
| 11 | <u>55</u> |
| <u>12</u> | 60 |

Rule:

Input \times 5 = Output

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Input/Output Cards, Set 1

| INPUT | OUTPUT |
|-----------|------------|
| 5 | 55 |
| 8 | 88 |
| 9 | <u>99</u> |
| <u>11</u> | 121 |
| 12 | <u>132</u> |

Rule:

Input \times 11 = Output

| INPUT | OUTPUT |
|-----------|------------|
| 3 | 36 |
| 5 | 60 |
| <u>7</u> | 84 |
| 10 | <u>120</u> |
| <u>12</u> | 144 |

Rule:

Input \times 12 = Output

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Input/Output Cards, Set 1

| INPUT | OUTPUT |
|----------|----------|
| 27 | 9 |
| 21 | 7 |
| 15 | <u>5</u> |
| <u>9</u> | 3 |
| 3 | <u>1</u> |

Rule:

$$\frac{\text{Input} \div 3 =}{\text{Output}}$$

| INPUT | OUTPUT |
|-----------|----------|
| 81 | 9 |
| 72 | 8 |
| <u>54</u> | 6 |
| 45 | <u>5</u> |
| <u>27</u> | 3 |

Rule:

$$\frac{\text{Input} \div 9 =}{\text{Output}}$$

| INPUT | OUTPUT |
|-----------|----------|
| 84 | 12 |
| 70 | 10 |
| <u>49</u> | 7 |
| 35 | <u>5</u> |
| <u>14</u> | 2 |

Rule:

$$\frac{\text{Input} \div 7 =}{\text{Output}}$$

| INPUT | OUTPUT |
|-----------|----------|
| 72 | 9 |
| 64 | 8 |
| <u>40</u> | 5 |
| 36 | <u>4</u> |
| <u>4</u> | 1 |

Rule:

$$\frac{\text{Input} \div 8 =}{\text{Output}}$$

| INPUT | OUTPUT |
|-----------|----------|
| 60 | 12 |
| 40 | 8 |
| 30 | <u>6</u> |
| <u>20</u> | 4 |
| 10 | <u>2</u> |

Rule:

$$\frac{\text{Input} \div 5 =}{\text{Output}}$$

| INPUT | OUTPUT |
|-----------|----------|
| 60 | 10 |
| 54 | 9 |
| <u>42</u> | 7 |
| 18 | <u>3</u> |
| <u>12</u> | 2 |

Rule:

$$\frac{\text{Input} \div 6 =}{\text{Output}}$$

Mark wanted to buy tickets to a movie. The ticket prices are below. Which choice describes the rule?

| Number of Tickets | Price |
|-------------------|-------|
| 2 | \$12 |
| 3 | \$18 |
| 4 | \$24 |
| 7 | \$42 |

- A. Number of tickets $\times 7 =$ Price
- B. Number of tickets $\div 7 =$ Price
- C. Number of tickets $\times 6 =$ Price
- D. Number of tickets $\div 6 =$ Price

The table below shows the relationship between values of the input/output table. Which choice describes the rule?

| INPUT | OUTPUT |
|-------|--------|
| 48 | 12 |
| 32 | 8 |
| 16 | 4 |
| 8 | 2 |

A. $\text{Input} \div 4 = \text{Output}$

B. $\text{Input} \times 8 = \text{Output}$

C. $\text{Input} \times 4 = \text{Output}$

D. $\text{Input} \div 8 = \text{Output}$

Ida works at a florist shop where each bouquet made contains 12 flowers. Which table shows the number of flowers in 2, 5, 8, and 9 bouquets?

A.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 2 | 24 |
| 5 | 60 |
| 8 | 92 |
| 9 | 108 |

B.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 2 | 12 |
| 5 | 50 |
| 8 | 96 |
| 9 | 108 |

C.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 2 | 24 |
| 5 | 60 |
| 8 | 96 |
| 9 | 108 |

D.

| Number of Bouquets | Number of Flowers |
|--------------------|-------------------|
| 2 | 12 |
| 5 | 50 |
| 8 | 96 |
| 9 | 108 |

Whatley bought packs of paint brushes for the art room. The table below shows the number of brushes in each pack.

| | | | | |
|--------------------------|----|----|----|----|
| Number of Brushes | 12 | 24 | 36 | 42 |
| Number of Packs | 2 | 4 | 6 | 7 |

- A. number of packs \times 6 = number of brushes
- B. number of packs \div 6 = number of brushes
- C. number of brushes \div 8 = number of packs
- D. number of brushes \times 8 = number of packs

$$350 \div n = 5$$

$$n = \underline{\hspace{10em}70\hspace{10em}}$$

$$u \times 10 = 100$$

$$u = \underline{\hspace{10em} 10 \hspace{10em}}$$

$$11 \times a = 7,700$$

$$a = \underline{\hspace{10em}700\hspace{10em}}$$

$$1,400 \div k = 7$$

$$k = \underline{\hspace{10em} 200 \hspace{10em}}$$

$$8,100 \div w = 900$$

$$w = \underline{\hspace{10em}9\hspace{10em}}$$

$$r \times 600 = 3,600$$

$$r = \underline{\hspace{10em}6\hspace{10em}}$$

$$1,000 \div b = 50$$

$$b = \underline{\hspace{10em} 200 \hspace{10em}}$$

$$d \times 800 = 6,400$$

$$d = \underline{\hspace{2cm}8\hspace{2cm}}$$

$$3 \times q = 1,500$$

$$q = \frac{500}{1}$$

$$2,400 \div p = 60$$

$$p = \underline{\hspace{10em}40\hspace{10em}}$$

Zilo mowed 7 lawns last weekend, earning \$125 per lawn. What is the total amount of money, n , that Zilo earned mowing lawns last weekend?

Equation: _____ **\$875**

Darren purchased 45 soccer balls for the team. If he can fit 9 soccer balls in a bin, how many bins, n , does Darren need to fit all the soccer balls?

Equation: _____ **5 bins**

Rob mowed lawns and earned \$65 each day for three days. If Jake only mowed lawns for one day, earning \$50, how much more money did Rob earn than Jake? Draw a strip diagram to model the problem and solve.

Answer: **\$145**

Lola drove 121 miles last weekend.
Tim drove 3 times as far as Lola.
How many miles did Tim drive?
Draw a strip diagram to model the
problem and solve.

Answer: 363 miles

Kylie went shopping and spent \$39 on each shirt she purchased. If she purchased 5 shirts at the same price, how much did she spend on shirts? Draw a strip diagram to model the problem and solve.

Answer: **\$195**

Nolan swam 40 laps each day on Monday, Tuesday, and Wednesday. Thomas swam 55 laps on Wednesday. How many laps did the boys swim in all? Draw a strip diagram to model the problem and solve.

Answer: 175 miles

A family went to the movies and purchased 2 adult tickets and 3 children's tickets. If the total cost of the tickets was \$29, what was the price of the adult tickets and the children's tickets?

- A. Adult tickets \$7 each
Children tickets \$3 each
- B. Adult tickets \$3 each
Children tickets \$7 each
- C. Adult tickets \$7 each
Children tickets \$5 each
- D. Adult tickets \$5 each
Children tickets \$7 each

Bob's school started a recycling program. They recycled 450 cans a day for 8 days. The next month they recycled 365 cans a day for 7 days. What was the total number of cans recycled for both months?

- A. 2,555 cans
- B. 3,600 cans
- C. 5,475 cans
- D. 6,155 cans

Madison drove 15 minutes to school every day. She drove 20 minutes home from school every day because she had to drop off a friend. How many minutes did Madison spend driving to and from school over 5 days?

- A. 75 minutes
- B. 95 minutes
- C. 100 minutes
- D. 175 minutes

Trey hit 75 golf balls each day Monday through Friday. He hit 150 balls each day on Saturday and Sunday. How many golf balls did Trey hit Monday through Sunday?

- A. 675 golf balls
- B. 525 golf balls
- C. 300 golf balls
- D. 375 golf balls

Rita earned \$300 for babysitting over the past 5 nights. She earned the same amount each night. How much did Rita earn for each night of babysitting? Draw a strip diagram to model the problem and solve.

Answer: \$60

Logan drove 640 miles to the Grand Canyon and 640 miles back home from the Grand Canyon. If it took Logan a total of 6 days to drive to the Grand Canyon and back, how many miles did he travel each day (he traveled the same number of miles each day). Draw a strip diagram to model the problem and solve.

Answer: 213 r3 miles

Megan received a shipment of 64 pounds of butter. She wants to split the butter equally into 8 crates. How many pounds of butter will be put in each crate? Draw a strip diagram to model the problem and solve.

Answer: 8 pounds of butter

Candace made 16 dozen donuts for her school's bake sale. If she packaged the donuts in stacks of 8, how many donuts were in each stack? Draw a strip diagram to model the problem and solve.

Answer: 24 donuts

Timber Elementary collected 450 cans in week one of their can drive, 555 in week two of their can drive, and 399 cans in week three. If all the cans were split equally into 3 bins, how many cans were in each bin?

- A. 301 cans
- B. 468 cans
- C. 318 cans
- D. 283 cans

Joey caught 35 fish each day for 6 days in a row. He was able to store 5 fish in each cooler. How many coolers did Joey need to store all his fish?

- A. 35 coolers
- B. 37 coolers
- C. 40 coolers
- D. 42 coolers

Ross Replacement Tire Company received a shipment of 64 dozen tires. If every car that comes in needs all its tires replaced, how many cars will the tire company be able to service? (Note: all cars serviced have four tires.)

- A. 64 cars
- B. 784 cars
- C. 150 cars
- D. 192 cars

Brooke bought a package of 400 beads. She gave 120 of the beads of her sister. If she uses the remaining beads to make bracelets with 8 beads each, how many bracelets will Brooke be able to make?

- A. 15 bracelets
- B. 35 bracelets
- C. 50 bracelets
- D. 40 bracelets

Understand

Sample answer: How many cookies did Betty not display?

Plan

$$60 \times 12 = 720$$
$$720 - 425 = ?$$

Betty purchased 60 dozen cookies for a bake sale. If she puts 425 cookies out on display, how many cookies are not being displayed?

Solve

295 cookies

Check

295 cookies

Understand

Sample answer: How much money did each of the three charities receive?

Plan

$$\begin{aligned} \$500 \times 3 &= \$1500 \\ \$1500 \div 4 &= ? \end{aligned}$$

Roger's school collected \$500 each week for three weeks. The school decided to split the money evenly among four charities. How much money will each charity receive?

Solve

\$375

Check

$$\begin{aligned} \$500 \times 3 &= \$1500 \\ \$1500 \div 4 &= \$375 \end{aligned}$$

Understand

Sample answer: How many basketballs were in each group?

Plan

$$200 - 60 = 140$$
$$140 \div 2 = ?$$

Harriett pumped up 200 basketballs for her coach. She gave 60 basketballs to the Junior Varsity team. Then she divided the remaining basketballs evenly into two groups for the varsity team. How many basketballs were in each group?

Solve

70 basketballs

Check

$$200 - 60 = 140$$
$$140 \div 2 = 70 \text{ basketballs}$$

Understand

Sample answer: How much money does Anna have leftover?

Plan

$$\begin{aligned} \$45 \times 8 &= \$360 \\ \$360 - \$299 &= ? \end{aligned}$$

Anna earned \$45 a night for babysitting. She babysat for 8 nights in a row. If she spent \$299 of what she earned, how much money does she have remaining?

Solve

\$61

Check

$$\begin{aligned} \$45 \times 8 &= \$360 \\ \$360 - \$299 &= \$61 \end{aligned}$$

Mia harvested 300 oranges in her backyard. She gave 9 dozen of the oranges to her neighbors and kept the rest. How many oranges did Mia keep for herself?



Which answer best represents b , the number of oranges that Mia kept for herself?

- A. 108 oranges
- B. 175 oranges
- C. 192 oranges
- D. 200 oranges

Gavin has 445 action figure toys. John has 129 fewer action figure toys than Gavin. How many action figure toys do the boys have in all?

| | |
|--------------|-------------|
| Gavin's Toys | John's Toys |
| f | |

Which answer best represents f , the total number of action figure toys that the boys have?

- A. 316 toys
- B. 771 toys
- C. 574 toys
- D. 761 toys

Emily's school earned \$755 selling dance tickets for a fundraiser. Kay's school earned \$670 for their fundraiser. If the schools combined their money and split it among three charities, how much money will each charity receive?

| | | |
|----------------|--------------|-----|
| Emily's School | Kay's School | |
| n | n | n |

Which answer shows n , the amount of money each charity will receive?

- A. \$225
- B. \$350
- C. \$475
- D. \$1,425

Brody earned \$400 doing lawn work in his neighborhood. He owed \$158 to his dad and bought two pairs of pants that cost \$55 each. How much money does Brody have left over?



Which answer shows m , the amount of money that Brody has left over?

- A. \$252
- B. \$187
- C. \$132
- D. \$77

Tina went shopping with \$200. She bought 3 shirts that were \$45 each. How much money does Tina have left?

- A. \$65
- B. \$75
- C. \$105
- D. \$135

Ned collected 110 stamps. He realized that 65 of the stamps were duplicates and gave those away. If the remaining stamps were each worth \$3, how much money could Ned make if he sold the stamps?

A. \$65

B. \$75

C. \$105

D. \$135

Kerri purchased movie tickets for her family. Each adult ticket cost \$10 and each child's ticket cost \$7. If she needs to purchase 4 adult tickets and 6 child's tickets, how much money will Kerri spend on tickets?

A. \$40

B. \$42

C. \$82

D. \$170

Dylan purchases 9 crates of lobsters for his restaurant. Each crate contains 105 lobsters. If the restaurant has 5 tanks in which to evenly split the lobsters, how many lobsters will be put into each tank?

- A. 21 lobsters
- C. 45 lobsters

- B. 189 lobsters
- D. 945 lobsters

Chandler drove 300 miles on Tuesday, 200 miles on Wednesday, and 150 miles on Thursday. If Jason drove the exact same number of miles as Chandler, how many total miles did the men drive?

A. 550 miles

B. 650 miles

C. 1,200 miles

D. 1,300 miles

Barry went to Paint Palace to purchase 5 gallons of paint. Each gallon of paint cost \$15. If Barry paid with a \$100 bill, how much change did he receive?

- A. \$15
- B. \$20
- C. \$25
- D. \$30

Joe had 145 tennis balls. Jack had twice as many tennis balls as Joe. How many tennis balls do the boys have altogether?

435 tennis balls

Margaret harvested 35 dozen apples from her orchard. She gave 400 apples to a local food bank. How many apples does Margaret have remaining?

| | |
|----------|---|
| 35 dozen | |
| 400 | 9 |

Which equation represents q , the number of apples that Margaret has left?

- A. $(35 \times 12) - 400 = q$
- B. $12 - (35 \times 400) = q$
- C. $(35 \times 12) + 400 = q$
- D. $(400 \times 12) - 35 = q$

Carly's Flower Shop had 32 dozen flowers in stock. They sold 125 flowers and received a shipment of 200 flowers. How many flowers does Carly's Flower Shop have in stock now?

459 flowers

Examine the input/output table below. Determine the rule for the table.

| INPUT | OUTPUT |
|-------|--------|
| 48 | 12 |
| 36 | 9 |
| 28 | 7 |
| 20 | 5 |
| 16 | 4 |

Rule: **Input \div 4 = Output**

Solve for the unknown expression below.

$$3,600 \div m = 9$$

$$m = \underline{\quad 400 \quad}$$

Charles has 432 building bricks and Jack has three times as many building bricks as Charles. How many building bricks do Charles and Jack have altogether?

| | |
|---------------------------|------------------------|
| Charles's building bricks | Jack's building bricks |
| t | |

Which expression represents t , the total number of building bricks the boys have together?

- A. $(432 \times 3) + 432$
- B. 432×3
- C. $432 + 432$
- D. $(400 \times 12) - 25$

Delany had 100 toys to put into bins. Each bin can hold 9 toys. How many bins will Delany need to store her toys?

Answer: 12 bins

Examine the chart below and determine the rule. Then fill in the blanks.

| INPUT | OUTPUT |
|----------|-----------|
| 4 | 24 |
| 7 | 42 |
| 8 | <u>48</u> |
| <u>9</u> | 54 |
| 12 | <u>60</u> |

Rule: Input \times 6 = Output

Solve for the unknown expression below.

$$2,100 \div k = 30$$

$$k = \underline{\quad 70 \quad}$$

Jocelyn purchased 400 charms from the store. She is making bracelets that have 7 charms each. How many bracelets will Jocelyn be able to make?

Answer: 57 bracelets

Perry Middle School has 324 students attending a field trip. The students need to be in groups of 9. Into how many groups will the students be split?

Answer: 36 groups

