

# Math Practice Sheets

## Multiplication Part II



Student Name \_\_\_\_\_

Examples

Practice Questions

Extra Challenge Unit

## Example



Mr. Owen has 6 gloves. How many fingers are in the 6 gloves there?

Use the distributive property to break apart facts to find the product of  $6 \times 5$ .

One way:

Break apart 6 into  $2 + 4$ .

i.e.  $(2 \times 5) + (4 \times 5)$

$$10 + 20 = 30$$

So,  $6 \times 5 = 30$

$\therefore$  There are 30 fingers in 6 gloves.

Another way to find  $6 \times 5$  is you can break apart 5 into  $4 + 1$ .

i.e.  $(6 \times 4) + (6 \times 1)$

$$24 + 6 = 30$$

So,  $6 \times 5 = 30$

$\therefore$  There are 30 fingers in 6 gloves.

## Exercise

1. Find the product. Use breaking apart rule.

a)  $6 \times 9 = (4 \times 9) + (\underline{\quad} \times 9) = \underline{\quad} + 18 = \underline{\quad}$

---

b)  $7 \times 4 = (\underline{\quad} \times 4) + (2 \times 4) = 20 + \underline{\quad} = \underline{\quad}$

---

c)  $5 \times 6 = (3 \times 6) + (\underline{\quad} \times 6) = \underline{\quad} + 12 = \underline{\quad}$

---

d)  $6 \times 7 = (\underline{\quad} \times 7) + (1 \times 7) = 35 + \underline{\quad} = \underline{\quad}$

---

e)  $7 \times 8 = (7 \times 2) + (7 \times \underline{\quad}) = \underline{\quad} + 42 = \underline{\quad}$

---

f)  $6 \times 6 = (\underline{\quad} \times 6) + (2 \times 6) = 24 + \underline{\quad} = \underline{\quad}$

---

Exercise

2. Find each product. Use the breaking apart procedure.

a)  $7 \times 9$

---

b)  $5 \times 5$

---

c)  $6 \times 8$

---

d)  $7 \times 3$

---

e)  $6 \times 12$

---

f)  $5 \times 4$

---

g)  $7 \times 7$

---

h)  $6 \times 3$

---

i)  $7 \times 10$

---

j)  $8 \times 5$

---

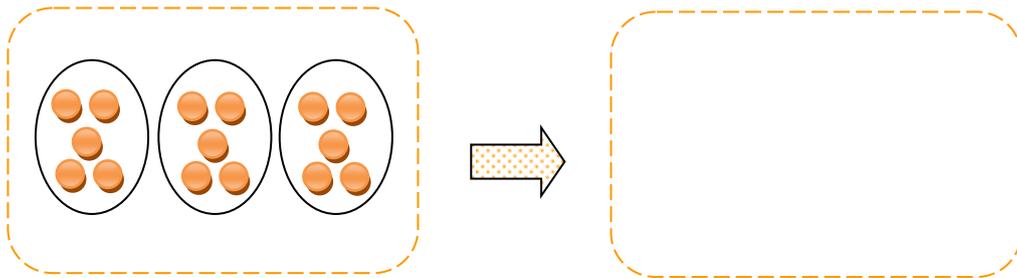
k)  $10 \times 6$

---

## Exercise

Solve the problems below.

3. There are 3 groups of 5 counters.  
Rearrange them into 5 groups of 3 counters.



4. Choose the correct symbol to make the given equation true.

$$15 \square 6 = 90$$

a)  $\div$ b)  $\times$ c)  $-$ d)  $+$ 

5. Can you calculate  $2 \times 6$  and double it to find  $6 \times 6$ ? Why or why not?

6. There are  $7 \times 6$  students in the fourth grade. Find the total number of students using the breaking apart procedure.

## Example

There are 8 teams in a field. Each team has 9 players.  
How many players are there in total?

Use the breaking apart procedure on the first factor or on the second factor to find  $8 \times 9$ .

Break apart 8

$$\begin{aligned}8 &= 5 + 3 \\8 \times 9 &= (5 \times 9) + (3 \times 9) \\&= 45 + 27 \\&= 72\end{aligned}$$

Break apart 9

$$\begin{aligned}9 &= 2 + 7 \\8 \times 9 &= (8 \times 2) + (8 \times 7) \\&= 16 + 56 \\&= 72\end{aligned}$$

$\therefore$  There are 72 players in total.

## Exercise

1. Find the product. Use breaking apart.

a)  $8 \times 5 = (8 \times \underline{\quad}) + (8 \times 2) = 24 + \underline{\quad} = \underline{\quad}$

---

b)  $9 \times 4 = (9 \times 2) + (9 \times \underline{\quad}) = \underline{\quad} + 18 = \underline{\quad}$

---

c)  $7 \times 8 = (5 \times 8) + (\underline{\quad} \times 8) = \underline{\quad} + 16 = \underline{\quad}$

---

d)  $10 \times 9 = (10 \times \underline{\quad}) + (10 \times 5) = 40 + \underline{\quad} = \underline{\quad}$

---

e)  $9 \times 9 = (\underline{\quad} \times 9) + (4 \times 9) = 45 + \underline{\quad} = \underline{\quad}$

---

f)  $8 \times 10 = (8 \times \underline{\quad}) + (8 \times 5) = 40 + \underline{\quad} = \underline{\quad}$

---

## Exercise

2. Find the product. Use break apart.

a)  $9 \times 3$

---

b)  $8 \times 6$

---

c)  $5 \times 9$

---

d)  $11 \times 8$

---

e)  $9 \times 12$

---

f)  $8 \times 8$

---

g)  $9 \times 10$

---

h)  $8 \times 7$

---

i)  $9 \times 8$

---

j)  $10 \times 8$

---

k)  $9 \times 9$

---

## Exercise

Solve the problems below.

3. Is  $9 \times 5$  equal to  $9 \times 3$  plus  $9 \times 2$ ?
4. Which one of the following shows 8 groups of 11 students?
- a)  $(8 \times 11) + (11 \times 8)$                       b)  $(2 \times 5) + (6 \times 6)$
- c)  $(2 \times 11) + (6 \times 11)$                       d)  $(3 \times 11) + (6 \times 11)$
5. There are 9 dozen books at a garage sale. Each dozen contain 12 books. Find the total number of books.
6. There are 5 groups of 8 students. 10 students did not play basketball. How many students play basketball?

## Example

You can use patterns when multiplying by 10, 11, and 12.

Multiples of 10

$10 \times 1 = 10$

$10 \times 2 = 20$

$10 \times 3 = 30$

$10 \times 4 = 40$

$10 \times 5 = 50$

$10 \times 6 = 60$

$10 \times 7 = 70$

.

.

Note: Place a zero in the ones digit of the factor that is not 10.

Multiples of 11

$11 \times 1 = 11$

$11 \times 2 = 22$

$11 \times 3 = 33$

$11 \times 4 = 44$

$11 \times 5 = 55$

$11 \times 6 = 66$

$11 \times 7 = 77$

.

.

Multiply the factor that is not 11 by 10. Then add the same factor to the product.

$11 \times 7 = (10 \times 7) + 7$

Multiples of 12

$12 \times 1 = 12$

$12 \times 2 = 24$

$12 \times 3 = 36$

$12 \times 4 = 48$

$12 \times 5 = 60$

$12 \times 6 = 72$

$12 \times 7 = 84$

.

.

Break 12 into  $10 + 2$ . Then use the breaking apart procedure.

$12 \times 7 = (10 \times 7) + (2 \times 7)$

## Exercise

1. Find each product. Use breaking apart.

$$\text{a) } 11 \times 8 = (10 \times 8) + (\underline{\quad} \times 8) = \underline{\quad} + 8 = \underline{\quad}$$


---

$$\text{b) } 12 \times 9 = (\underline{\quad} \times 9) + (2 \times 9) = 90 + \underline{\quad} = \underline{\quad}$$


---

$$\text{c) } 7 \times 11 = (7 \times \underline{\quad}) + (7 \times 1) = 70 + \underline{\quad} = \underline{\quad}$$


---

$$\text{d) } 8 \times 12 = (8 \times 10) + (8 \times \underline{\quad}) = \underline{\quad} + 16 = \underline{\quad}$$


---

$$\text{e) } 12 \times 12 = (10 \times 12) + (\underline{\quad} \times 12) = \underline{\quad} + 24 = \underline{\quad}$$


---

## Exercise

2. Find each product.

a)  $10 \times 6$

---

b)  $12 \times 5$

---

c)  $11 \times 4$

---

d)  $11 \times 11$

---

e)  $9 \times 10$

---

f)  $12 \times 11$

---

g)  $11 \times 10$

---

h)  $9 \times 11$

---

i)  $12 \times 10$

---

j)  $10 \times 10$

---

k)  $12 \times 12$

---

## Exercise

Solve the problems below.

3. There are 7 groups of 12 players. Use the breaking apart procedure to find the total number of players.

4. Which of the following equation is true?

$$12 \square 11 = 132$$

a)  $12 \times 11 = 132$

b)  $12 + 11 = 132$

c)  $12 + 12 = 132$

d)  $11 + 12 = 132$

5. Is  $11 \times 9$  equal to  $(11 \times 3) + (11 \times 5)$ ? Why or why not?

6. Can you break apart either factor to find a multiplication fact? Explain with an example.

## Example

Ross completes 9 puzzles each day. How many puzzles does he complete in 12 days?

One way to find the product of  $12 \times 9$  is use a horizontal form of multiplication.

$$\text{i.e. } 12 \times 9 = 108$$

Another way is to find the product of  $12 \times 9$  by using a vertical form of multiplication.

$$\begin{array}{r} \boxed{1} \\ 12 \\ \times 9 \\ \hline 108 \end{array}$$

- Multiply 9 with ones, i.e.  $9 \times 2 = 18$  means 8 ones and 1 ten.
- Multiply 9 with 1, i.e.  $9 \times 1 = 9$  and  $9 + 1 = 10$

## Exercise

1. Find each product using the requested horizontal or vertical form of multiplication.

a)

$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

b)

$$8 \times 11 = \underline{\quad}$$

c)

$$12 \times 7 = \underline{\quad}$$

d)

$$\begin{array}{r} 11 \\ \times 3 \\ \hline \end{array}$$

e)

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

f)

$$5 \times 10 = \underline{\quad}$$

## Exercise

Solve the problems below.

2. Dyan, Eva, and Donald each have 7 chocolates. How many chocolates do they have in total? Solve using vertical multiplication.

3. Which one is 'NOT' correct for the product of  $11 \times 4$ ?

a)  $11 + 11 + 11 + 11$

b) 
$$\begin{array}{r} 11 \\ \times 4 \\ \hline \end{array}$$

c) 
$$\begin{array}{r} 4 \\ \times 11 \\ \hline \end{array}$$

d)  $4 + 4 + 4 + 4$

4. Andrea collected 3 dozen pennies. Kelvin collected 1 dozen more pennies than Andrea collected. How many pennies did Kelvin collect? Use vertical multiplication.
5. Sophia takes 10 minutes to complete the set of homework problems. How many minutes would it take her to complete 4 sets of homework? Use vertical and horizontal forms of multiplication.

## Example

×	1	2	3	4	5	6	7	8	9	10
1	1									
2		4								
3			9							
4				16						
5					25					
6						36				
7							49			
8								64		
9									81	
10										100

In this multiplication table, the elements of the diagonal are the product of two identical numbers.

The numbers in the diagonal are 1, 4, 9, 16, 25, 36, 49, 64, 81, and 100.

These are called square numbers.

## Exercise

1. Find each product.

a)

$$6 \times 6 = \underline{\quad}$$

b)

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \square \end{array}$$

c)

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \square \end{array}$$

d)

$$10 \times 10 = \underline{\quad}$$

e)

$$2 \times 2 = \underline{\quad}$$

f)

$$\begin{array}{r} 5 \\ \times 5 \\ \hline \square \end{array}$$

g)

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \square \end{array}$$

h)

$$3 \times 3 = \underline{\quad}$$

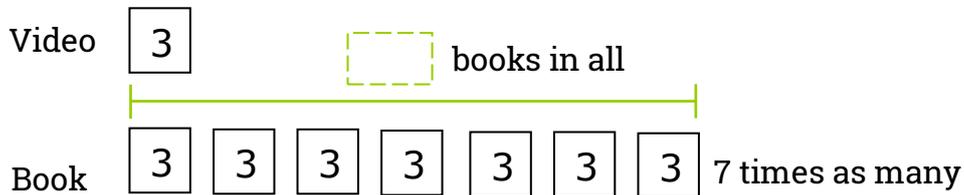
## Exercise

Solve the problems below.

2. What number multiplied by itself will give the product 64?
  
  
  
  
  
  
  
  
  
  
3. Which one of the following is 'NOT' a square number?
  - a) 9
  - b) 15
  - c) 25
  - d) 16
  
  
  
  
  
  
  
  
  
  
4. \$81 was distributed among some students. If each student got more than \$1, and all students got the same amount of money, how much money did each student receive? How many students received money?
  
  
  
  
  
  
  
  
  
  
5. A certain number of men spent \$49. If each spent the same amount of money as there were men who spent the money, how many men spent money?

## Example

There are 3 videos in a library. The library has 7 times as many books as videos. How many books are there?



Multiplication sentence

$$7 \times 3 = 21$$

So, there are 21 books in total.

## Exercise

1. Draw a picture and answer the following questions.

a) Sylvia bought some notebooks and pens.

She bought 4 times as many pens as notebooks.

If she bought 5 pens, how many notebooks did she buy?

b) The fourth graders form 2 basketball teams.

The eighth graders form 6 times as many teams as the fourth graders. Following this same pattern, how many teams can the eighth grade form?

## Exercise

2. Gloria saw 7 stars. Ryan counted 9 times as many stars as Gloria saw. Find the total number of stars Ryan counted.
3. On Saturday, Samuel swims 8 laps. On Sunday, he swims 3 times as many laps as she did on Saturday. How many laps does Samuel swim on Sunday? Circle the correct answer.
- a)  $8 + 3 = 11$                       b)  $8 - 3 = 5$
- c)  $8 + 8 = 16$                       d)  $8 \times 3 = 24$
4. Mr. Rodgers is setting up tables and chairs for a party. There are 6 tables. If there are four chairs for each table, find the total number of chairs.
5. Briana has 5 comic books. She has 5 times as many math books as comic books. How many math books does Briana have?

## Exercise

1. Many students are graduating this year. The graduating students are standing in five equal rows. There are seven students in each row. How many students are graduating?
2. How could the factors of  $5 \times 9 = 45$  help you to find  $8 \times 9$ ? (Hint: breaking apart rule)
3. Which of the following shows  $6 \times 11$ ? Circle your answer.
  - a)  $6 + 6 + 6 + 6 + 6 + 6$
  - b)  $(6 \times 10) - (6 \times 1)$
  - c)  $(6 \times 10) + (6 \times 1)$
  - d)  $(5 \times 1) + (1 \times 10)$
4. Use breaking apart rule to find each product.
  - a)  $15 \times 10$
  - b)  $12 \times 25$
  - c)  $9 \times 14$

## Exercise

5. \$144 was distributed among some workers. If there were as many workers as the amount of money each worker received, how many workers received money?
6. Find any four multiplication facts from the given puzzle. Circle each multiplication fact and its answer putting the sign '×' and '='.

1	7	2	16	3	5	15
7	2	7	8	9	3	8
6	14	5	6	3	6	6
7	4	0	3	40	18	1
×	9	5	5	3	7	4
0	2	6	7	8	1	8
0						

7. Estrella has 10 apples and 5 times as many mangoes as apples. How many mangoes does she have? How many fruits are there in all?

# Congratulations!

You have finished a lesson. You should be very proud of yourself.

Now it is time to progress to the next lesson.

Your next assignment is notated by a green arrow.

Lesson 1 Learning Numeration

Lesson 2 Addition and Subtraction Part I

Lesson 3 Addition and Subtraction Part II

Lesson 4 Multiplication Part I

Review 1 Review of Lesson 1, 2, 3, and 4

Lesson 5 Multiplication Part II

Lesson 6 Division



Unit 6.1 Division Concept

Unit 6.2 Connecting Multiplication with Division

Unit 6.3 Division Facts to 9

Unit 6.4 Special Division Problems

Unit 6.5 Problem Solving Using Pictures and Equations

Unit 6.6 Math Challenges

Lesson 7 Multiplying by 1-Digit Numbers Part I

Lesson 8 Multiplying by 1-Digit Numbers Part II

Review 2 Review of Lesson 5, 6, 7, and 8

Lesson 9 Algebra Part I

Lesson 10 Algebra Part II

Lesson 11 Multiplication Strategies

Lesson 12 Multiplication by 2-Digit Numbers

Review 3 Review of Lesson 9, 10, 11, and 12

Lesson 13 Dividing by 1-Digit Numbers Part I

Lesson 14 Dividing by 1-Digit Numbers Part II

Lesson 15 Geometry Part I

Lesson 16 Geometry Part II

Review 4 Review of Lesson 13, 14, 15, and 16

Lesson 17 Fractions

Lesson 18 Fraction Operation

Lesson 19 Decimals

Lesson 20 Decimal Number Operation

Review 5 Review of Lesson 17, 18, 19, and 20

Lesson 21 Measurement Part I

Lesson 22 Measurement Part II

Lesson 23 Solid and Measurement

Lesson 24 Graph

Review 6 Review of Lesson 21, 22, 23, and 24

Lesson 25 Equation and Function

Lesson 26 Transformation, Congruence, and Symmetry

Lesson 27 Probability

Review of Lesson 1 to 14

Review of Lesson 15 to 27

---

Unit 5.1

1. a)  $6 \times 9 = (4 \times 9) + (2 \times 9) = 36 + 18 = 54$       b)  $7 \times 4 = (5 \times 4) + (2 \times 4) = 20 + 8 = 28$   
c)  $5 \times 6 = (3 \times 6) + (2 \times 6) = 18 + 12 = 30$       d)  $6 \times 7 = (5 \times 7) + (1 \times 7) = 35 + 7 = 42$   
e)  $7 \times 8 = (7 \times 2) + (7 \times 6) = 14 + 42 = 56$       f)  $6 \times 6 = (4 \times 6) + (2 \times 6) = 24 + 12 = 36$
2. a) 63      b) 25      c) 48      d) 21      e) 72      f) 20  
g) 49      h) 18      i) 70      j) 40      k) 60
4. b      5. no      6. 42
- 

Unit 5.2

1. a)  $8 \times 5 = (8 \times 3) + (8 \times 2) = 24 + 16 = 40$       b)  $9 \times 4 = (9 \times 2) + (9 \times 2) = 18 + 18 = 36$   
c)  $7 \times 8 = (5 \times 8) + (2 \times 8) = 40 + 16 = 56$       d)  $10 \times 9 = (10 \times 4) + (10 \times 5) = 40 + 50 = 90$   
e)  $9 \times 9 = (5 \times 9) + (4 \times 9) = 45 + 36 = 81$       f)  $8 \times 10 = (8 \times 5) + (8 \times 5) = 40 + 40 = 80$
2. a) 27      b) 48      c) 45      d) 88      e) 108      f) 64  
g) 90      h) 56      i) 72      j) 80      k) 81
3. yes      4. c      5. 108      6. 30
- 

Unit 5.3

1. a)  $11 \times 8 = (10 \times 8) + (1 \times 8) = 80 + 8 = 88$       b)  $12 \times 9 = (10 \times 9) + (2 \times 9) = 90 + 18 = 108$   
c)  $7 \times 11 = (7 \times 10) + (7 \times 1) = 70 + 7 = 77$       d)  $8 \times 12 = (8 \times 10) + (8 \times 2) = 80 + 16 = 96$   
e)  $12 \times 12 = (10 \times 12) + (2 \times 12) = 120 + 24 = 144$
2. a) 60      b) 60      c) 44      d) 121      e) 90      f) 132  
g) 110      h) 99      i) 120      j) 100      k) 144
3. 84      4. a      5. no
- 

Unit 5.4

1. a) 60      b) 88      c) 84      d) 33      e) 96      f) 50  
2. 21      3. d  
4. 48      5. 40
- 

Unit 5.5

1. a) 36      b) 49      c) 16      d) 100      e) 4      f) 25  
g) 81      h) 9
2. 8      3. b      4. \$9; 9      5. 7
- 

Unit 5.6

1. a) 20      b) 12      2. 63      3. d      4. 24      5. 25
- 

Unit 5.7

1. 35      2.  $(8 \times 9) = (5 \times 9) + (3 \times 9) = 45 + 27 = 72$       3. c  
4. a) 150      b) 300      c) 126  
5. 12  
6.  $3 \times 5 = 15$ ;  $7 \times 2 = 14$ ;  $8 \times 1 = 8$ ;  $3 \times 6 = 18$   
7. 50; 60
-