

TABLE OF CONTENTS

Practices

Multiplication

1	Multiplication properties	5
2	Multiply mentally	9
3	Multiply by 1-digit numbers	13
4	Multiply by 2-digit numbers	17

Review 1	Practices 1–4	21
Review 2	Practices 1–4	23

Division

5	Relate division to multiplication	25
6	Divide without regrouping	29
7	Divide with regrouping	33

Fractions

8	Equivalent fractions	37
----------	--------------------------------	----

Review 3	Practices 5–8	41
Review 4	Practices 5–8	43

9	Simplify fractions	45
----------	------------------------------	----

Decimals

10	Decimal place value	49
11	Compare and order decimals	53
12	Relate decimals to fractions	57

Review 5	Practices 9–12	61
Review 6	Practices 9–12	63

Plane geometry

13	Angles	65
-----------	--------------	----

Linear measurement and area

14	Understand area	69
-----------	-----------------------	----

15	Area of rectangles	73
-----------	--------------------------	----

Graphs

16	Dot plots	77
-----------	-----------------	----

Review 7	Practices 13–16	81
-----------------	-----------------------	----

Review 8	Practices 13–16	83
-----------------	-----------------------	----

Additional practices

Multiplication

17	Multiply 3-digit numbers	85
-----------	--------------------------------	----

Division

18	1-digit divisors	89
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Fractions

19	Add and subtract like fractions	93
-----------	---------------------------------------	----

Review 9	Practices 17 and 18	97
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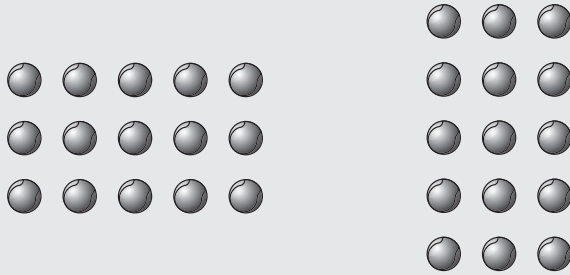
Review 10	Practice 19	99
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Glossary	101
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MULTIPLICATION PROPERTIES

Use the arrays to solve the problem.

1. How are these multiplication facts related?

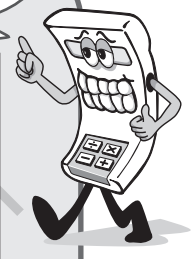


$3 \times \underline{\quad} = 15$ and $5 \times \underline{\quad} = 15$
 ↙ ↘ ↙ ↘
 factors product factors product

Solution: If you know $5 \times 3 = 15$, then you also know
 $\underline{\quad} \times 5 = \underline{\quad}$.

Let's solve this together.

The **Commutative Property of Multiplication** is also known as the Order Property of Multiplication. You can change the order of the factors and the product is the same.



Solve each problem. Fill in the blanks.

2. $2 \times 3 = \underline{\quad}$
 and
 $3 \times 2 = \underline{\quad}$

3.

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

4. If you know $8 \times 6 = \underline{\quad}$,
 then you know $6 \times \underline{\quad} = \underline{\quad}$.

5. Write two multiplication facts using the numbers 7, 8 and 56.

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

Solve each problem. Choose the best answer.

6. What number is missing from this equation?

$$8 \times 5 = 5 \times \square$$

- (A) 5
- (B) 8
- (C) 13
- (D) 40

7. Which is an example of the Commutative Property of Multiplication?

- (A) $8 + 9 = 9 + 8$
- (B) $8 + 9 = 9 \times 8$
- (C) $8 \times 9 = 9 \times 8$
- (D) $8 \times 8 = 9 \times 9$

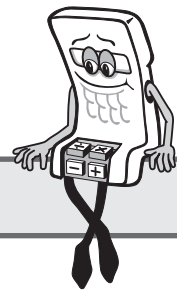
8. If $7 \times 9 = 63$, then $9 \times 7 = \square$.

- (A) 14
- (B) 16
- (C) 56
- (D) 63

9. Pablo knows that $6 \times 9 = 54$.

So, he also knows that _____.

- (A) $9 + 6 = 15$
- (B) $9 \times 6 = 54$
- (C) $6 \times 9 = 69$
- (D) $9 \times 6 = 96$



REASONING

Solve the problem.

10. Jody has 4 bags of 5 apples.
Lance has 5 bags of 4 apples.
Who has more apples? Explain.

Use pictures, words or numbers to show your work.

Solve each problem. Choose the best answer.

6. What number is missing from this equation?

$$(4 \times 6) \times 5 = 4 \times (\square \times 5)$$

- (A) 4
- (B) 5
- (C) 6
- (D) 15

7. Which is an example of the Associative Property of Multiplication?

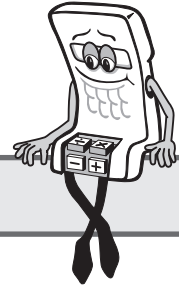
- (A) $6 \times 3 = 3 \times 6$
- (B) $6 + 3 = 3 + 6$
- (C) $(6 + 3) + 2 = 6 + (3 + 2)$
- (D) $(6 \times 3) \times 2 = 6 \times (3 \times 2)$

8. Which is an example of the Commutative Property of Multiplication?

- (A) $6 \times 3 = 3 \times 6$
- (B) $6 + 3 = 3 + 6$
- (C) $(6 + 3) + 2 = 6 + (3 + 2)$
- (D) $(6 \times 3) \times 2 = 6 \times (3 \times 2)$

9. Betty has 4 boxes of biscuits. Each box has 2 layers of 6 biscuits. How many biscuits does she have?

- (A) 8
- (B) 12
- (C) 24
- (D) 48



REASONING

Solve the problem. Explain your thinking.

10. Draw a model of Betty's boxes of biscuits in number 9 above.

Fill in the numbers. $4 \times (2 \times \underline{\quad}) = (\underline{\quad} \times \underline{\quad}) \times \underline{\quad} = \underline{\quad}$

Why do you think it is easier and faster to find $(4 \times 2) \times 6$ than it is to find $4 \times (2 \times 6)$?

REVIEW 1: PRACTICES 1 AND 2

Solve each problem. Choose the best answer.

1. Which makes the sentence true?

$$70 \times \blacksquare = 6300$$

- (A) 9
- (B) 90
- (C) 900
- (D) 9000

2.
$$\begin{array}{r} 96 \\ \times 7 \\ \hline \end{array}$$

- (A) 622
- (B) 672
- (C) 722
- (D) 742

3. One minibus can carry 12 students. How many students can 15 minibuses carry?

- (A) 45
- (B) 150
- (C) 180
- (D) 540

4. Kayla bought 3 bags of buttons. There were 200 buttons in each bag. How many buttons did she buy in all?

- (A) 203
- (B) 600
- (C) 3200
- (D) 6000

**MENTAL
MATHS**

Match the multiplication problem with the correct answer. Solve as many problems as you can using mental maths. Then solve the rest on paper. Show your work.



5. 9×32

6. 90×30

7. 58×39

8. 7×400

9. 8×35

10. 60×43

A 280

B 288

C 2580

D 2700

E 2800

F 2262

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