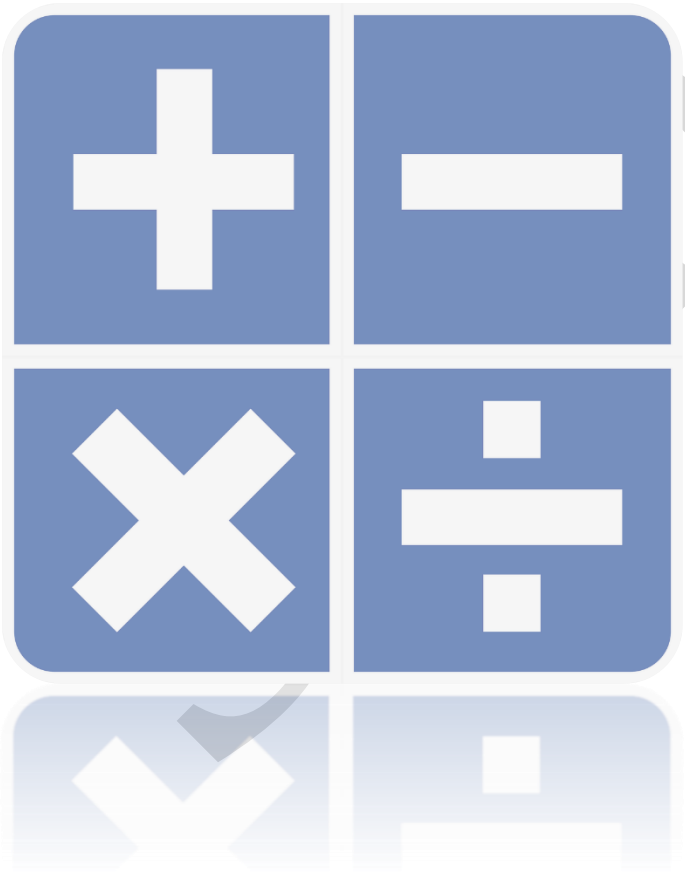
4 Operations of Whole Number

Focus on Problem Solving (P4)



Holiday Programme (Dec 2025)

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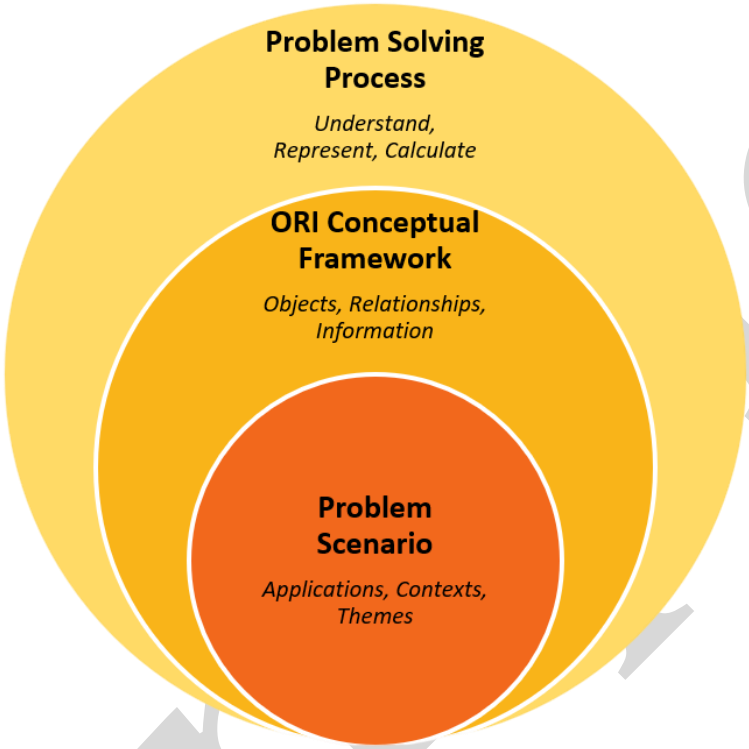
Relational Concepts Approach (RCA)

The Relational Concepts Approach (RCA) is a structured way of solving mathematical word problems.

It encourages learners to first **understand the underlying relationships** and present them in **clear and concise representations** before carrying out any computations.



Our proprietary **ORI Conceptual Framework** forms the core of the approach.

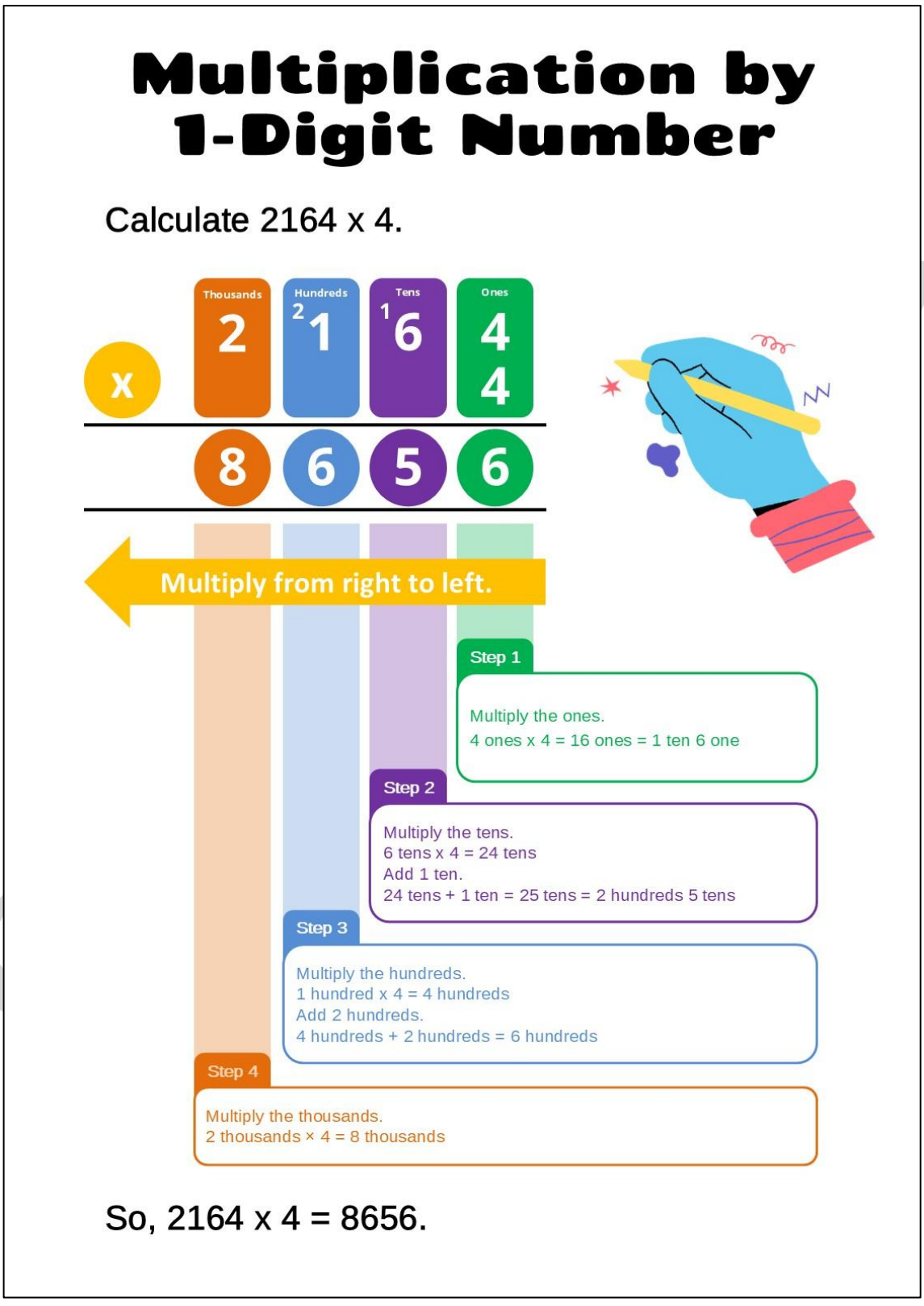
It guides learners to systematically break down a word problem to identify the mathematical **objects** involved, their **relationships** and the **information** provided.

Multiplications & Divisions

1 Math Essentials

1.1 Multiplications by 1-Digit Numbers

Let's Learn



1.2 Multiplications by 2-Digits Numbers

Let's Learn

Multiplication by 2-Digits Number

Calculate 246 x 34.

Multiply from right to left.

	Thousands	Hundreds	Tens	Ones
		1 1 2	1 2 4	6
x			3	4
		9	8	4
+	7	3	8	0
	8	3	6	4

Step 1

Multiply 246 by 4.
i. 6 ones × 4 = 24 ones = 2 tens 4 ones
ii. 4 tens × 4 = 16 tens = 1 hundred 6 tens
6 tens + 2 tens = 8 tens
iii. 2 hundreds × 4 = 8 hundreds
8 hundreds + 1 hundreds = 9 hundreds

Step 2

Multiply 246 by 30.
i. 6 ones × 30 = 180 ones = 1 hundred and 8 tens
ii. 4 tens × 30 = 120 tens = 1 thousand 2 hundreds
2 hundreds + 1 hundred = 3 hundreds
iii. 2 hundreds × 30 = 60 hundreds
= 6 thousands
6 thousands + 1 thousand = 7 thousands

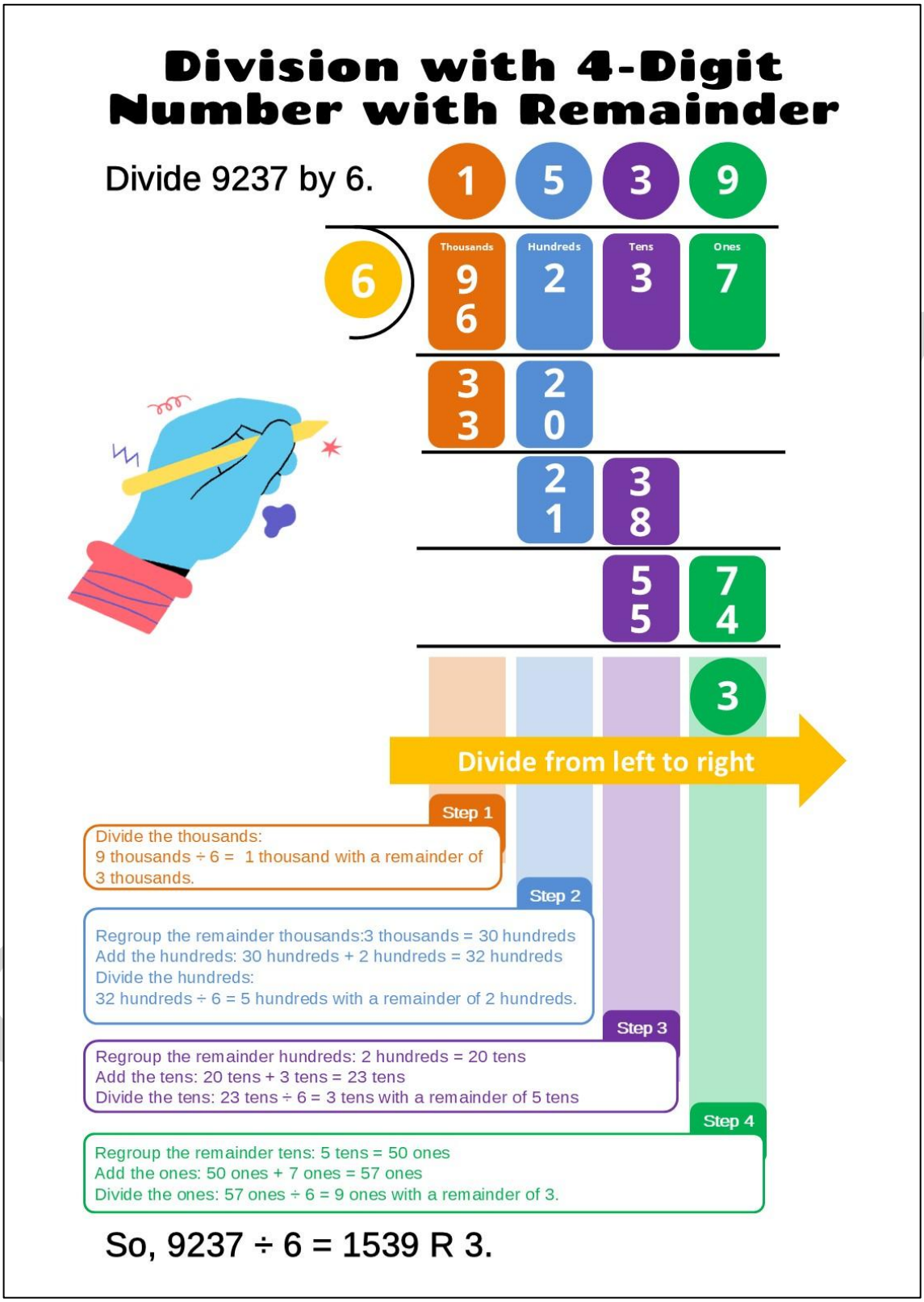
Step 3

Add.
984 + 7380 = 8364

So, 246 × 34 = 8364.

1.3 Divisions by 1-Digit Numbers

Let's Learn

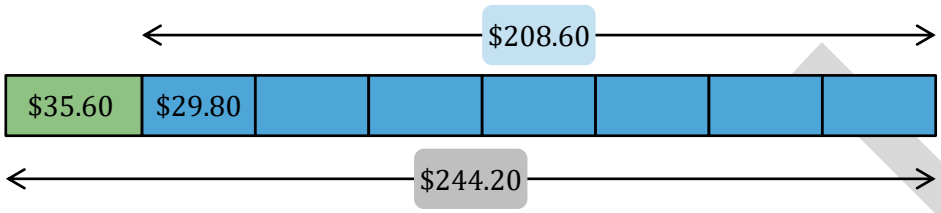


2 Problem Solving: Items with Values in Unequal Parts

Let's Relate

1 A shirt cost $35.60 and a tie cost $29.80.
John bought a shirt and 7 ties.
He spent $35.60 on the shirt and $208.60 on the ties.

- He spent $244.20 in all.



The ORI Table

Type of Objects:	Items (Numbers)/ with Values/ with Measurements
Parts of Objects:	No Parts/ Unequal Parts/ Equal Parts/ with Subparts
Comparison:	Yes/ No
Changes:	Yes/ No

Type of Questions

Type	Question	Information Given/ Implied				
		Item1	Item2			Toal
		Value	Quan	Unit Val	Value	Value
1	A shirt cost $35.60 and a tie cost $29.80. John bought a shirt and 7 ties. How much did John spend altogether?	√	√	√		
2	The shirt cost $35.60. John spent $244.20 on a shirt and 7 ties. How much did a tie cost?	√	√			√
3	John spent $243.60 on a shirt and some ties. A shirt cost $35.60 and a tie cost $8.00. How many ties did he buy?	√		√		√

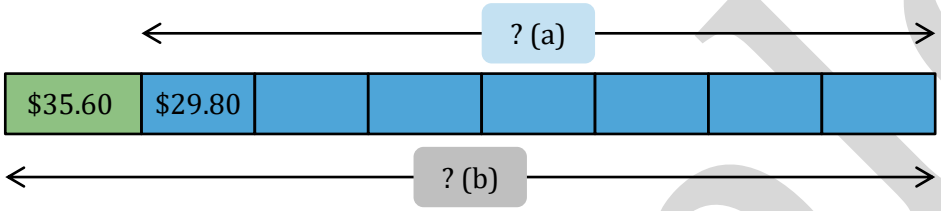
2.1 Type 1 Questions

Let's Learn

1 A shirt cost $35.60 and a tie cost $29.80.
John bought a shirt and 7 ties.

(a) How much did John spend on the ties?

(b) How much did John spend altogether?



(a) 1 Tie → 29.80

7 Ties → 29.80 × 7 = 208.60

He spent $208.60 on the ties.

(b) 35.60 + 208.60 = 244.20

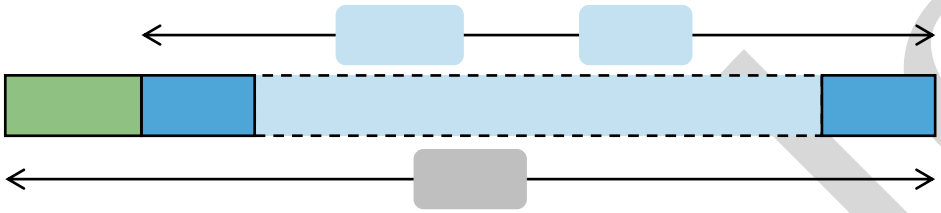
He spent $244.20 altogether.

Practice 2.1

1 A notebook cost \$12.10 and a pen cost \$5.30.
Ben bought a notebook and 13 pens.

(a) How much did Ben spend on the pens?

(b) How much did Ben spend altogether?



(a) →

→ =

He spent on the pens.

(b) =

He spent altogether.

2 A bottle cost $89.20 and a cup cost $21.30.
Millie bought a bottle and 62 cups.
How much did Millie spend altogether?

3 A ring cost $899.95 and a bracelet cost $82.90.
Maddy bought a ring and 99 bracelets.
How much did Maddy spend altogether?

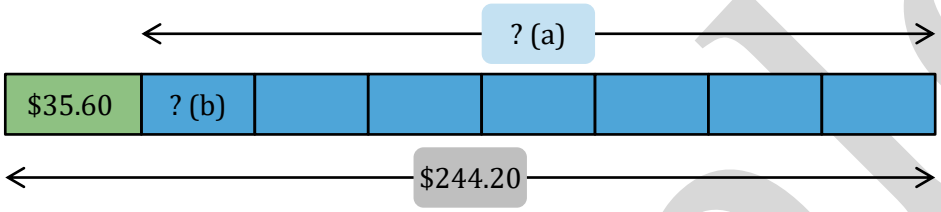
2.2 Type 2 Questions

Let's Learn

1 The shirt cost $35.60.
John spent $244.20 on a shirt and 7 ties.

(a) How much did John spend on the ties?

(b) How much did a tie cost?



(a) 244.20 - 35.60 = 208.60

He spent $208.60 on the ties.

(b) 7 Ties → 208.6

1 Tie → 208.60 ÷ 7 = 29.80

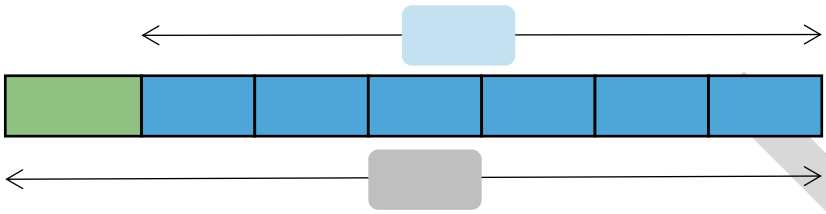
A tie cost $29.80 .

Practice 2.2

1 The jacket cost $48.75.
Emma spent $341.25 on a jacket and 6 scarves.

(a) How much did Emma spend on the scarves?

(b) How much did a scarf cost?



(a) =

She spent on the scarves.

(b) →

→ =

A scarf cost .

2 The pair of shoes cost $299.80.
Liam spent $678.40 on a pair of shoes and 5 belts.
How much did a belt cost?

3 The handbag cost $1633.20.
Sophia spent $3127.20 on a handbag and 8 purses.
How much did a purse cost?

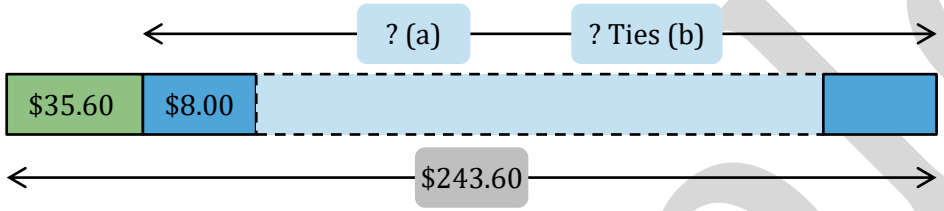
2.3 Type 3 Questions

Let's Learn

1 John spent $243.60 on a shirt and some ties.
A shirt cost $35.60 and a tie cost $8.00.

(a) How much did John spend on the ties?

(b) How many ties did he buy?



(a) 243.60 - 35.60 = 208.00

He spent $208.00 on the ties.

(b) 208.00 ÷ 8 = 26

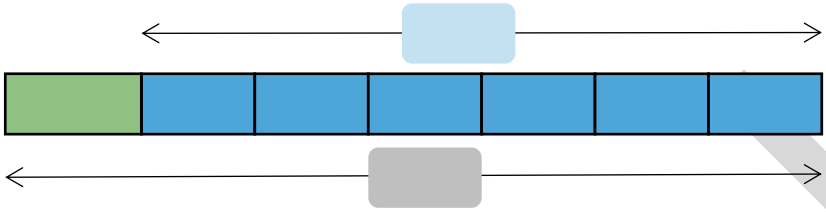
He bought 26 ties.

Practice 2.3

1 The jacket cost $48.75.
Emma spent $341.25 on a jacket and 6 scarves.

(a) How much did Emma spend on the scarves?

(b) How much did a scarf cost?



(a) =

She spent on the scarves.

(b) →

→ =

A scarf cost .

2 Brian spent $1248.60 on a suit and some shirts.
A suit cost $348.60 and a shirt cost $9.
How many shirts did he buy?

3 Nina spent $88 007.00 on a car and some car stickers.
The car cost $87 623.00 and a car sticker cost $6.00.
How many car stickers did she buy?