

• Review of Addition

- Added numbers are called **addends** and the answer is the **sum**.

$$\text{addend} + \text{addend} = \text{sum}$$

Example:

$$\begin{array}{r} 5 \quad \text{addend} \\ + 2 \quad + \text{addend} \\ \hline 7 \quad \text{sum} \end{array}$$

- The Commutative Property of Addition** tells us that changing the order of the addends does not change the sum.

$$6 + 3 = 9 \quad 3 + 6 = 9$$

- The Identity Property of Addition** tells us that when we add zero to a number, that number does not change.

$$7 + 0 = 7 \quad 0 + 2 = 2$$

- The expression $2 + 6 = 8$ is a **number sentence**.
- "Some and some more"** problems have an addition formula.

Formula	Problem
$\begin{array}{r} \text{Some} \\ + \text{Some more} \\ \hline \text{Total} \end{array}$	$\begin{array}{r} 6 \text{ volleyballs} \\ + 7 \text{ volleyballs} \\ \hline 13 \text{ volleyballs} \end{array}$

- To find a missing addend, we subtract the known addend from the sum.

$$\begin{array}{r} 5 \\ + n \\ \hline 8 \end{array} \quad \begin{array}{r} 8 \\ - 5 \\ \hline n = 3 \end{array} \quad \begin{array}{r} n \\ + 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 6 \\ - 4 \\ \hline n = 2 \end{array}$$

Practice:

1. $5 + 4 =$ _____ 2. $3 + 0 =$ _____ 3. $1 + 3 + 7 =$ _____

4. Write two number sentences to show the commutative property of 3 and 8:

_____ + _____ = _____

_____ + _____ = _____

Find the missing addend.

5. $7 + n = 12$

$n =$ _____

6. $n + 5 = 13$

$n =$ _____

• Missing Addends

- To find a missing **addend**, we subtract the sum of the given addends from the given total.

Example:	7	$7 + 6 = 13$	sum of given addends
	n	$18 - 13 = 5$	subtract from total
	$\underline{+ 6}$	$n = 5$	missing addend
	18		

- Look for pairs of addends that can be added together to equal 10. These are "sets of 10."

Sets of 10

$9 + 1 = 10$

$8 + 2 = 10$

$7 + 3 = 10$

$6 + 4 = 10$

$5 + 5 = 10$

Practice:

Find each missing addend.

1. $9 + 3 + n = 16$

$9 + 3 = 12$

$16 - 12 = \underline{\hspace{2cm}}$

$n = \underline{\hspace{2cm}}$

2. $x + 5 + 4 = 16$

$5 + 4 = 9$

$16 - 9 = \underline{\hspace{2cm}}$

$n = \underline{\hspace{2cm}}$

3. $7 + y + 4 + 8 = 25$

$7 + 4 + 8 = 19$

$25 - 19 = \underline{\hspace{2cm}}$

$y = \underline{\hspace{2cm}}$

4. $6 + 5 + n + 9 + 2 + 7 = 34$

$6 + 5 + 9 + 2 + 7 = \underline{\hspace{2cm}}$

$34 - 29 = \underline{\hspace{2cm}}$

$n = \underline{\hspace{2cm}}$

Find sets of 10. Add.

5. $9 + 2 + 6 + 4 + 5 + 1 + 8 = \underline{\hspace{2cm}}$

6. $5 + 4 + 7 + 3 + 9 + 2 + 1 + 1 = \underline{\hspace{2cm}}$

7. $8 + 4 + 2 + 6 + 3 + 1 + 7 + 9 + 5 = \underline{\hspace{2cm}}$

• **Sequences**

• **Digits**

Sequences

- **Counting numbers** have no end.

1, 2, 3, 4, 5, ...

- A **sequence** is a counting pattern. It can go “up” or “down.”

5, 10, 15, 20, 25, ...

20, 15, 10, 5, ...

- Subtract to find the **rule**.

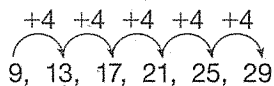
Example:

9, 13, 17, _____, _____, _____, ...

We can also look at the 4s row in the times table to find other numbers in the sequence.

$$\begin{array}{r} 13 \\ - 9 \\ \hline 4 \end{array} \qquad \begin{array}{r} 17 \\ - 13 \\ \hline 4 \end{array}$$

The rule for this sequence is count up by fours.



Digits

- Digits are the numerals 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

471 has three digits.

The last digit is 1.

Practice:

Write the rule and the next two numbers of each counting sequence.

1. 9, 8, 7, _____, _____, ...

2. 2, 5, 8, 11, _____, _____, ...

Rule: Count down by _____.

Rule: Count up by _____.

Find the missing number in each counting sequence.

3. 35, 30, 25, _____, 15 ...

4. 2, _____, 12, 17, 22, 27 ...

How many digits are in each number?

5. 108 _____

6. 5372 _____

What is the last digit of each number?

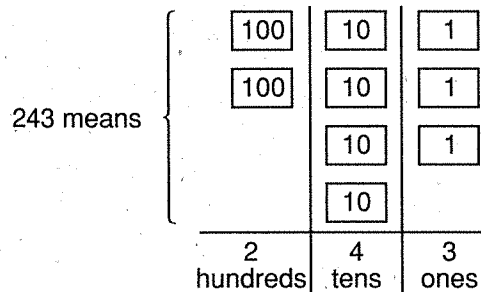
7. 214 _____

8. 75,391 _____

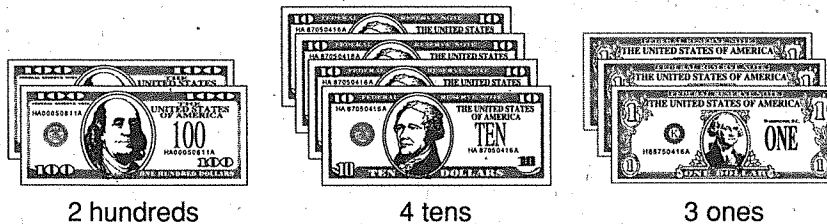
• **Place Value**

- Separate a three-digit number, such as money amount, into hundreds, tens, and ones.

Example:



- We can use money manipulatives to understand place value.



Practice:

1. Show \$132.

Hundreds	Tens	Ones

2. Show \$324.

Hundreds	Tens	Ones

Which is less: \$132 or \$324? Remember to write the dollar sign. _____

3. The digit 4 is in what place in each of these numbers?

a. 41 _____ b. 534 _____ c. 483 _____

4. 6 hundreds, 8 tens, and 3 ones equals _____.

• **Review of Subtraction**

- The answer to a subtraction problem is called the **difference**.

$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array} \text{ difference}$$

- Check subtraction by adding.

Subtract Down
Seven minus five equals two.

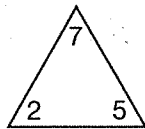
$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array}$$

Add Up
Two plus five equals seven.

- The **order** of numbers in subtraction is important.

$7 - 5$ is different from $5 - 7$.

- When you learn one **fact family**, you know four facts.

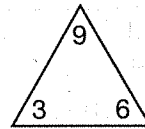


$$\begin{array}{r} 5 \\ + 2 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 2 \\ + 5 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 7 \\ - 2 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array}$$



$$\begin{array}{r} 9 \\ - 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 9 \\ - 6 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 6 \\ + 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \\ + 6 \\ \hline 9 \end{array}$$

Practice:

Subtract. Check your answers by adding.

1. $\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$

Check: $\begin{array}{r} 8 \\ + \\ \hline \end{array}$

2. $\begin{array}{r} 12 \\ - 7 \\ \hline \end{array}$

Check: $\begin{array}{r} 7 \\ + \\ \hline \end{array}$

3. $\begin{array}{r} 14 \\ - 6 \\ \hline \end{array}$

Check: $\begin{array}{r} 6 \\ + \\ \hline \end{array}$

4. $\begin{array}{r} 18 \\ - 9 \\ \hline \end{array}$

Check: $\begin{array}{r} 9 \\ + \\ \hline \end{array}$

5. $\begin{array}{r} 11 \\ - 4 \\ \hline \end{array}$

Check: $\begin{array}{r} 4 \\ + \\ \hline \end{array}$

6. $\begin{array}{r} 15 \\ - 8 \\ \hline \end{array}$

Check: $\begin{array}{r} 8 \\ + \\ \hline \end{array}$

- 7. Describe how to check a subtraction answer. Show an example.

You can check subtraction by _____.

Example:

- **Writing Numbers Through 999**

- **Whole numbers** are the counting numbers and the number zero.

0, 1, 2, 3, 4, 5, ...

0 zero	10 ten	20 twenty
1 one	11 eleven	30 thirty
2 two	12 twelve	40 forty
3 three	13 thirteen	50 fifty
4 four	14 fourteen	60 sixty
5 five	15 fifteen	70 seventy
6 six	16 sixteen	80 eighty
7 seven	17 seventeen	90 ninety
8 eight	18 eighteen	100 one hundred
9 nine	19 nineteen	

- Use hyphens when writing the numbers 21–99 (except numbers that end with 0).

426 four hundred twenty-six

809 eight hundred nine

- Don't write "and" unless you mean a decimal point.

\$2.78 two dollars *and* seventy-eight cents

Practice:

Use words to write each number.

1. 3 _____

2. 75 _____

3. 88 _____

4. 367 _____

5. 629 _____

Use digits to write each number.

6. fifteen _____

7. thirty-seven _____

8. one hundred seven _____

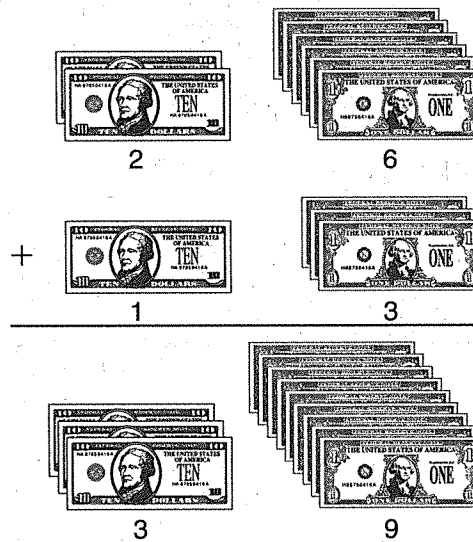
9. three hundred sixty-two _____

• Adding Money

- Money amounts are sometimes written as two-digit numbers when there are no coins. For example, twenty-five dollars might be written \$25.
- To add money amounts:
 1. Add the ones.
 2. Add the tens.
 3. Write the dollar sign.

Example: Sumika had \$26. Then on her birthday she was given \$13.
How much money does Sumika have now?

Solution: We can use \$10 bills and \$1 bills to add \$13 to \$26.



The total is 3 tens and 9 ones, which is \$39.

Practice:

Add. Remember to write the dollar sign.

$$\begin{array}{r} 1. \quad \$48 \\ + \$9 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad \$31 \\ + \$12 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad \$72 \\ + \$24 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad \$53 \\ + \$36 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad \$27 \\ + \$67 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \$63 \\ + \$22 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad \$51 \\ + \$43 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \$95 \\ + \$2 \\ \hline \end{array}$$

• Adding with Regrouping

- When added numbers in the ones column add up to more than 10 we can regroup the ones to make tens. Then we carry the new tens into the tens column.
- Regroup 10 ones to make 1 ten.

$$\begin{array}{r} 1 \\ 48 \\ + 15 \\ \hline 3 \end{array}$$

1. Add ones.
 $8 + 5 = 13$
2. Write the 3 and carry the 1 ten to the tens column.

$$\begin{array}{r} 1 \\ 57 \\ + 29 \\ \hline 6 \end{array}$$

1. Add ones.
 $7 + 9 = 16$
2. Write the 6 and carry the 1 ten to the tens column.

$$\begin{array}{r} 1 \\ 48 \\ + 15 \\ \hline 63 \end{array}$$

3. Add tens.
 $1 + 4 + 1 = 6$
4. Write the 6.

$$\begin{array}{r} 1 \\ 57 \\ + 29 \\ \hline 86 \end{array}$$

3. Add tens.
 $1 + 5 + 2 = 8$
4. Write the 8.

Practice:

Solve each problem using money manipulatives. Then add by regrouping to solve. Remember to write the dollar sign.

1.
$$\begin{array}{r} \$72 \\ + \$19 \\ \hline \end{array}$$

2.
$$\begin{array}{r} \$38 \\ + \$24 \\ \hline \end{array}$$

3.
$$\begin{array}{r} \$67 \\ + \$35 \\ \hline \end{array}$$

4.
$$\begin{array}{r} \$42 \\ + \$39 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$65 \\ + \$25 \\ \hline \end{array}$$

6.
$$\begin{array}{r} \$51 \\ + \$49 \\ \hline \end{array}$$

Use pencil and paper to add.

7.
$$\begin{array}{r} \$72 \\ + \$16 \\ \hline \end{array}$$

8.
$$\begin{array}{r} \$75 \\ + \$66 \\ \hline \end{array}$$

9.
$$\begin{array}{r} \$24 \\ + \$57 \\ \hline \end{array}$$

- **Even and Odd Numbers**

- **Even numbers:** 0, 2, 4, 6, 8, ...
- **Odd numbers:** 1, 3, 5, 7, 9, ...
- Look at the *last* digit:

383 odd654 even295 odd**Practice:**

Write "even" or "odd" for each number.

1. 72 _____

2. 781 _____

3. 490 _____

4. 15 _____

5. 213 _____

6. 1082 _____

7. List the five three-digit even numbers that have an 8 in the hundreds place and a 5 in the tens place.

a. 8 5 _____

b. _____

c. _____

d. _____

e. _____

8. List the five three-digit odd numbers that have a 4 in the hundreds place and a 9 in the tens place.

a. 4 9 _____

b. _____

c. _____

d. _____

e. _____

9. Write a three-digit even number. Write the number in words.

Words _____

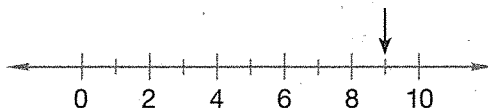
10. Write a three-digit odd number.

Words _____

• **Number Lines**

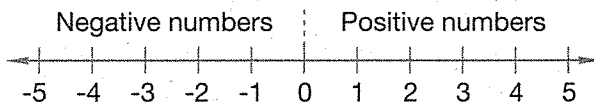
- To draw a number line, begin by drawing a line. Next, put tick marks on the line, keeping an equal distance between the marks. Then label the tick marks with numbers. Sometimes every mark can be labeled and on other number lines only some marks are labeled. The mark may be labeled by two, by four, by five, or by some other number. The labels are to indicate how far the mark is from zero.

Example: What number is the arrow pointing to?



Begin at zero and count by ones, the distance from one tick mark to the next is 1. The arrow is pointing to the number 9.

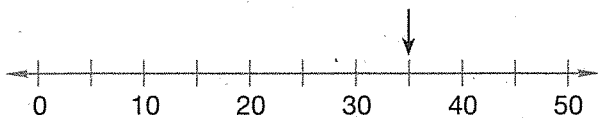
- Sometimes zero is not shown on the number line, so we must begin counting with the number shown and find the pattern of the numbers.
- Numbers that are greater than zero are called **positive** numbers and numbers that are less than zero are called **negative** numbers. To write a negative number, we write the negative sign (minus sign) to the left of the digit.
- Zero is neither positive nor negative.



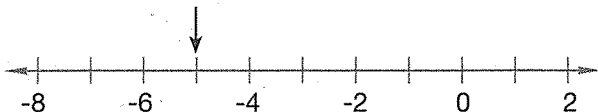
Practice:

To what number is each arrow point in problems 1-2?

1.



2.



Compare:

3. $4 \bigcirc -5$

4. $-8 \bigcirc -4$

5. $0 \bigcirc -7$

6. Create a number line in problem 2 to arrange these numbers in order from least to greatest:
7, -5, 3, -9, 0, -1

• **Addition Word Problems with Missing Addends**

- Addition formula: Some + Some more = Total

$$\begin{array}{r} 8 \text{ airplanes} \quad \text{addend} \\ + 6 \text{ airplanes} \quad \text{addend} \\ \hline 14 \text{ airplanes} \quad \text{sum} \end{array}$$

- If either one of the **addends** is missing, we subtract the known addend from the sum.

$$\begin{array}{r} 8 \text{ airplanes} \quad 14 \\ + x \text{ airplanes} \rightarrow - 8 \\ \hline 14 \text{ airplanes} \quad x = 6 \end{array}$$

$$\begin{array}{r} m \text{ airplanes} \quad 14 \\ + 6 \text{ airplanes} \rightarrow - 6 \\ \hline 14 \text{ airplanes} \quad m = 8 \end{array}$$

Practice:

1. Samantha had 5 books she borrowed from the library.

Her brother Brandon gave her some more books he borrowed. Samantha had a total of 12 books.

How many library books did Brandon give her? _____

$$\begin{array}{r} 5 \\ + n \\ \hline 12 \end{array}$$

2. Marguerite's father bought 7 gallons of paint for the fence. After lunch he ran out of paint and had to buy some more. Her father purchased 16 gallons of paint altogether.

How many gallons of paint did Marguerite's father buy after lunch? _____

$$\begin{array}{r} 7 \\ + n \\ \hline 16 \end{array}$$

Show the subtraction problem you would use to solve for the missing addend.

3. $5 + n = 13$ Subtraction problem: _____

4.
$$\begin{array}{r} 8 \\ + m \\ \hline 12 \end{array}$$

Subtraction problem: _____

5. $w + 7 = 15$

6.
$$\begin{array}{r} w \\ + 4 \\ \hline 10 \end{array}$$

• Missing Numbers in Subtraction

- To find missing numbers in subtraction:

When the top (first) number is missing, add.

$$\begin{array}{r} a \\ - 4 \\ \hline 7 \end{array} \rightarrow \begin{array}{r} 7 \\ + 4 \\ \hline a = 11 \end{array}$$

When the bottom (second) number is missing, subtract.

$$\begin{array}{r} 15 \\ - n \\ \hline 9 \end{array} \rightarrow \begin{array}{r} 15 \\ - 9 \\ \hline n = 6 \end{array}$$

Practice:

For problems 1–4, select the operation you need to use and then find each missing number. Check your answers.

1. $\begin{array}{r} 13 \\ - b \\ \hline \end{array} b = \underline{\quad}$

Check: $\begin{array}{r} 7 \\ + \\ \hline 13 \end{array}$

2. $\begin{array}{r} n \\ - 9 \\ \hline 2 \end{array} n = \underline{\quad}$

Check: $\begin{array}{r} 9 \\ + 2 \\ \hline \end{array}$

3. $\begin{array}{r} 18 \\ - x \\ \hline 9 \end{array} x = \underline{\quad}$

Check: $\begin{array}{r} 9 \\ + \\ \hline 18 \end{array}$

4. $\begin{array}{r} n \\ - 5 \\ \hline 10 \end{array} n = \underline{\quad}$

Check: $\begin{array}{r} 10 \\ + 5 \\ \hline \end{array}$

5. Write a subtraction problem with the bottom number missing. Solve and check your answer.

Find each missing number..

6. $w - 6 = 2$

7. $6 - y = 2$

8. $m - 6 = 9$

9. $9 - n = 6$

- **Adding Three-Digit Numbers**

- To add three-digit numbers, add numbers in columns from right to left, starting with the ones. Regroup and carry 10s to the next column.

Examples:

1. Add ones.
2. Add tens.
3. Add hundreds.

Show regrouping above. →

$$\begin{array}{r} 675 \\ + 175 \\ \hline 850 \end{array}$$

1. Add ones.
2. Add tens.
3. Add hundreds.

Show regrouping above. →

$$\begin{array}{r} 496 \\ + 374 \\ \hline 870 \end{array}$$

Practice:

Add. Remember to write the dollar sign in money problems.

1.
$$\begin{array}{r} \$358 \\ + \$156 \\ \hline \end{array}$$

2.
$$\begin{array}{r} \$719 \\ + \$208 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 674 \\ + 385 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 268 \\ + 392 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$836 \\ + \$199 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 777 \\ + 232 \\ \hline \end{array}$$

7.
$$\begin{array}{r} \$712 \\ + \$375 \\ \hline \end{array}$$

8.
$$\begin{array}{r} \$555 \\ + \$445 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 101 \\ + 199 \\ \hline \end{array}$$

- Subtracting Two-Digit and Three-Digit Numbers
- Missing Two-Digit Addends

Subtracting Two-Digit and Three-Digit Numbers

- To subtract three-digit numbers, work in one column at a time, starting with the ones:

Example:

1. Subtract ones.
2. Subtract tens.
3. Subtract hundreds.

$$\begin{array}{r}
 486 \\
 - 375 \\
 \hline
 111
 \end{array}$$

Missing Two-Digit Addends

- To find a missing addend, always **subtract**.

Examples:

$$\begin{array}{r}
 68 \\
 + a \\
 \hline
 96
 \end{array}
 \rightarrow
 \begin{array}{r}
 96 \\
 - 68 \\
 \hline
 a = 28
 \end{array}
 \qquad
 \begin{array}{r}
 n \\
 + 32 \\
 \hline
 83
 \end{array}
 \rightarrow
 \begin{array}{r}
 83 \\
 - 32 \\
 \hline
 n = 51
 \end{array}$$

Practice:

Remember to write the dollar sign in money problems.

1.
$$\begin{array}{r}
 \$257 \\
 - \$143 \\
 \hline
 \end{array}$$

2.
$$\begin{array}{r}
 \$678 \\
 - \$214 \\
 \hline
 \end{array}$$

3.
$$\begin{array}{r}
 576 \\
 - 326 \\
 \hline
 \end{array}$$

4.
$$\begin{array}{r}
 488 \\
 - 223 \\
 \hline
 \end{array}$$

5.
$$\begin{array}{r}
 \$857 \\
 - \$746 \\
 \hline
 \end{array}$$

6.
$$\begin{array}{r}
 666 \\
 - 444 \\
 \hline
 \end{array}$$

7.
$$\begin{array}{r}
 m \\
 + 31 \\
 \hline
 48
 \end{array}
 \qquad
 \begin{array}{r}
 48 \\
 - 31 \\
 \hline
 \end{array}$$

$m = \underline{\hspace{2cm}}$

8.
$$\begin{array}{r}
 45 \\
 + x \\
 \hline
 78
 \end{array}
 \qquad
 \begin{array}{r}
 78 \\
 - 45 \\
 \hline
 \end{array}$$

$x = \underline{\hspace{2cm}}$

• Subtracting Two-Digit Numbers with Regrouping

- When the top number in the ones column is less than the bottom number, we regroup by taking one 10 and moving it to the ones column.

Examples:

$$\begin{array}{r} 6 \text{ } 15 \\ 6 \cancel{7} \cancel{5} \\ - 157 \\ \hline 518 \end{array}$$

$$\begin{array}{r} 7 \text{ } 13 \\ 7 \cancel{8} \cancel{3} \\ - 478 \\ \hline 305 \end{array}$$

Practice:

Use money manipulatives to model each subtraction. Then solve on paper. Remember to write the dollar sign in money problems.

1.
$$\begin{array}{r} \$582 \\ - \$456 \\ \hline \end{array}$$

2.
$$\begin{array}{r} \$664 \\ - \$247 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 571 \\ - 364 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 280 \\ - 123 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$855 \\ - \$746 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 666 \\ - 447 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 590 \\ - 382 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 697 \\ - 258 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 126 \\ - 99 \\ \hline \end{array}$$

- **Expanded Form**
- **More on Missing Numbers in Subtraction**

Expanded Form

- To express a number in **expanded form** we separate it into place values. The number 255 means "2 hundreds plus 5 tens plus 5 ones".

We can write this in expanded form as: $200 + 50 + 5$.

Example: Write 368 in expanded form.
 $300 + 60 + 8$

Example: Write 603 in expanded form. There are zero tens.
 $600 + 3$

Missing Numbers in Subtraction

- To find missing numbers in subtraction:
 - If the top (first) number is missing, add.
 - If the bottom (second) number is missing, subtract.

Example:

$$\begin{array}{r} a \\ - 5 \\ \hline 13 \end{array} \rightarrow \begin{array}{r} 13 \\ + 5 \\ \hline a = 18 \end{array}$$
Practice:

Write each number in expanded form.

1. 764 _____ + _____ + _____

2. 519 _____ + _____ + _____

3. 406 _____ + _____

4. 610 _____ + _____

Find the missing number in the subtraction problem.

5.
$$\begin{array}{r} 26 \\ - w \\ \hline 15 \end{array}$$

$w =$ _____

6.
$$\begin{array}{r} p \\ - 26 \\ \hline 15 \end{array}$$

$p =$ _____

7. $n - 25 = 64$

$n =$ _____

8. $45 - x = 28$

$x =$ _____

• Adding Columns of Numbers with Regrouping

- Regroup from the ones to the tens column.

Regroup \rightarrow 4 Finding sets of 10 will help.

$$\begin{array}{r} 45 \\ 58 \\ 17 \\ 23 \\ 64 \\ 39 \\ + 86 \\ \hline 332 \end{array}$$

Practice:

Add.

$$\begin{array}{r} 1. \quad 65 \\ \quad 47 \\ \quad 19 \\ + 28 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 73 \\ \quad 29 \\ \quad 46 \\ + 11 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 42 \\ \quad 68 \\ \quad 27 \\ \quad 54 \\ + 86 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 96 \\ \quad 54 \\ \quad 32 \\ \quad 17 \\ + 24 \\ \hline \end{array}$$

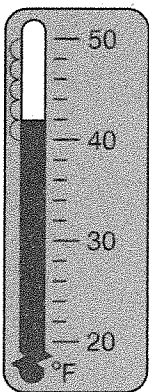
$$\begin{array}{r} 5. \quad 32 \\ \quad 67 \\ \quad 49 \\ \quad 23 \\ + 81 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 41 \\ \quad 58 \\ \quad 15 \\ \quad 76 \\ + 39 \\ \hline \end{array}$$

• **Temperature**

- A **scale** is a type of number line often used for measuring. Scales are found on rulers, gauges, thermometers, speedometers, and many other instruments.
- We use a thermometer to measure **temperature**. Temperature is usually measured in **degrees Fahrenheit (°F)** or in **degrees Celsius (°C)**.
- To read the temperature on a thermometer, try different skip counts to find the interval. On a thermometer, **tick marks** are often two degrees apart.

Example: What temperature is shown by this thermometer?

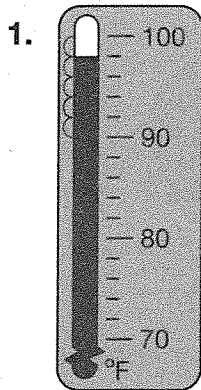


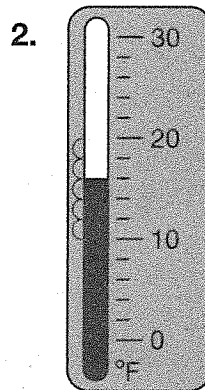
First, find the interval. Counting by 2s matches the marking on the scale.

Count up by 2s. The temperature is 42°F.

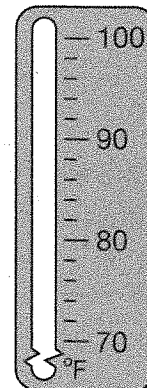
Practice:

What measurement is shown on each of these scales? Remember to write the units.



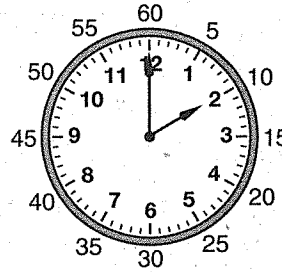


3. Jeremy reads the thermometer at 8:00 a.m. and records a temperature of 68°F. At 9:00 a.m., the temperature is 14° warmer. Shade in the thermometer to show the temperature at 9:00 a.m.

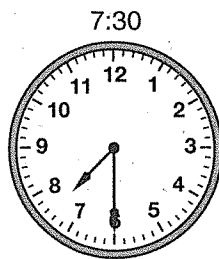


• **Elapsed-Time Problems**

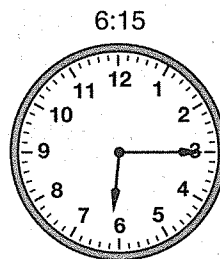
- The **short hand** tells the **hour**.
- The **long hand** tells the **minutes**.
- Count by 5s to find the number of minutes as the long hand moves from one whole number to the next.



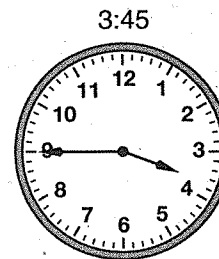
- A “quarter” in **time** is 15 minutes because 15 minutes is one quarter ($\frac{1}{4}$) of an hour.



“Half past seven”



“A quarter **after** six”

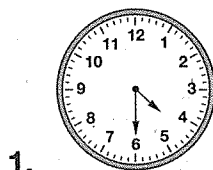


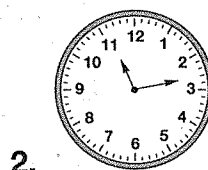
“A quarter **to** four”

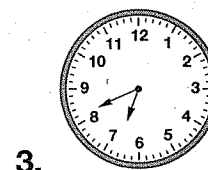
- **a.m.** = 12 hours before noon
- **p.m.** = 12 hours after noon

Practice:

If it is morning, what time is shown by each clock? Remember to write “a.m.” or “p.m.”







4. Use digital form to show what time it is at “ten minutes to seven” in the evening.

5. Use digital form to show what time it is at “twenty-five minutes after three” in the afternoon.

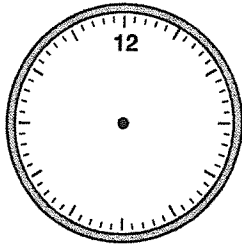
Name _____

Lesson Activity

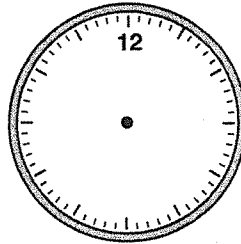
17

*For use with Lessons 19
and 27*

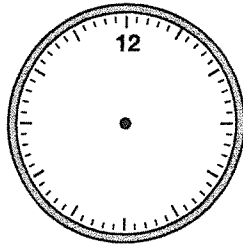
Clocks



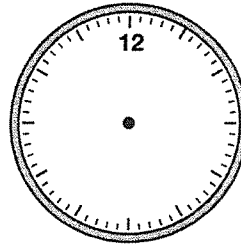
Time _____



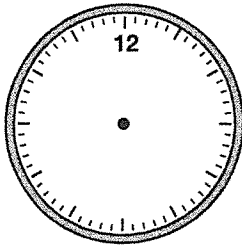
Time _____



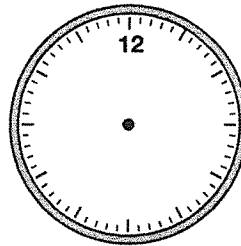
Time _____



Time _____



Time _____

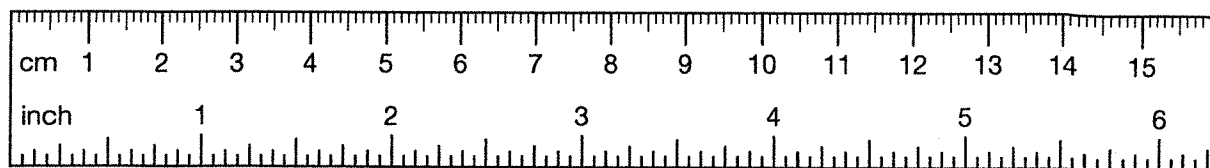


Time _____

Name _____

For use with Investigation 2

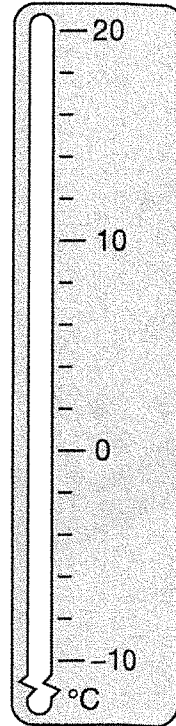
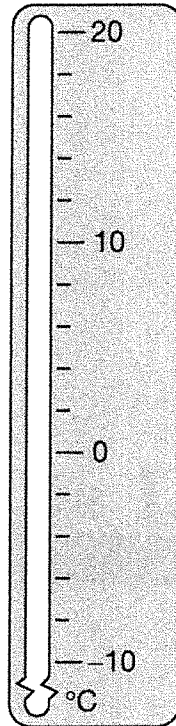
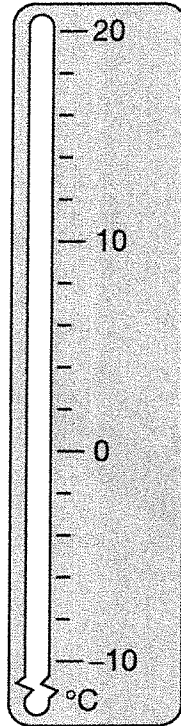
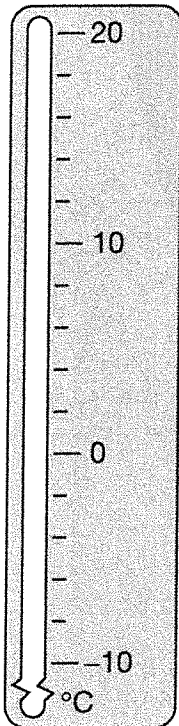
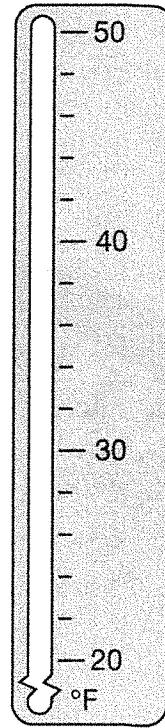
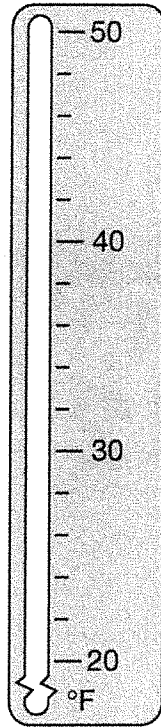
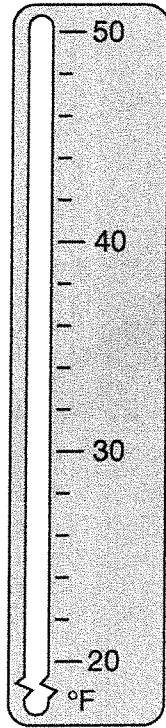
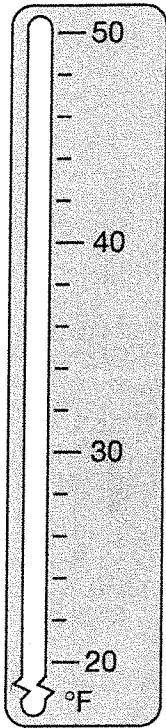
Ruler



Name _____

For use with Lesson 18

Celsius and Fahrenheit Thermometers



Name _____

*For use with Lessons 19, 27,
and 89*

Clock Face

