

• 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.

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

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

Practice:

1. Samantha had 5 books she borrowed from the library. 5
Her brother Brandon gave her some more books he $+ n$
borrowed. Samantha had a total of 12 books. 12
How many library books did Brandon give her? _____
2. Marguerite's father bought 7 gallons of paint for the 7
fence. After lunch he ran out of paint and had to buy some $+ n$
more. Her father purchased 16 gallons of paint altogether. 16
How many gallons of paint did Marguerite's father buy
after lunch? _____

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.

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

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

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

Practice:

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

1. $\begin{array}{r} 13 \\ - b \\ \hline 7 \end{array} b = \underline{\quad}$ 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:

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

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

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

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

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

• 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.
$$\begin{array}{r} 26 \\ - w \\ \hline 15 \end{array} = \underline{\quad}$$

$w =$ _____

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

$p =$ _____

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.

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

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

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

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

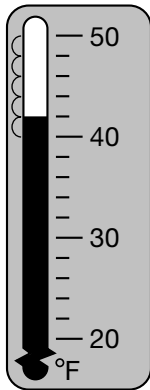
$$\begin{array}{r}
 5. \quad 32 \\
 \quad 67 \\
 \quad 49 \\
 \quad 23 \\
 + 81 \\
 \hline
 \end{array}$$

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

• 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?

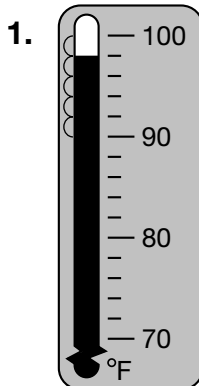


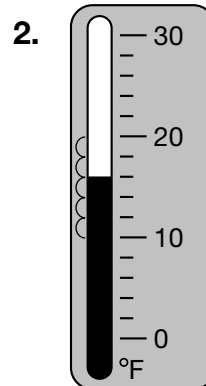
First, find the interval. Counting by 2s matches the marking on the scale.

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

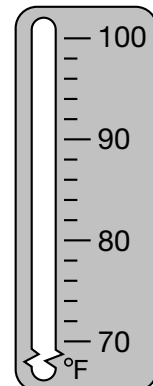
Practice:

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



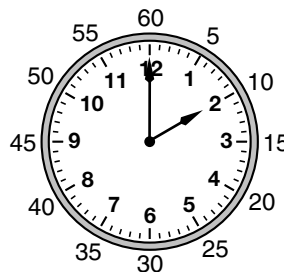


3. Jeremy reads the thermometer at 8:00 a.m. and records a temperature of 68°F . At 9:00 a.m., the temperature is 14° warmer. Shade in the thermometer to show the temperature at 9:00 a.m.

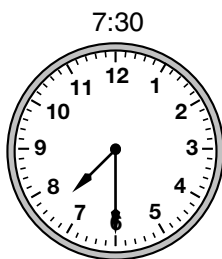


• **Elapsed-Time Problems**

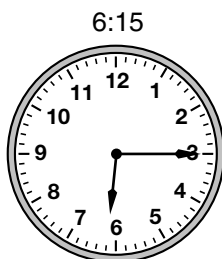
- The **short hand** tells the **hour**.
- The **long hand** tells the **minutes**.
- Count by 5s to find the number of minutes as the long hand moves from one whole number to the next.



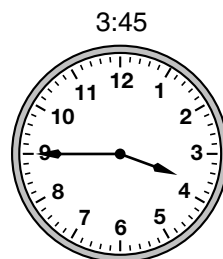
- A “quarter” in **time** is 15 minutes because 15 minutes is one quarter ($\frac{1}{4}$) of an hour.



“Half past seven”



“A quarter **after** six”

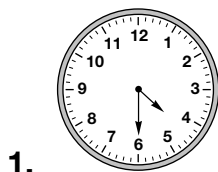


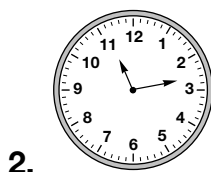
“A quarter **to** four”

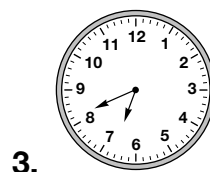
- **a.m.** = 12 hours before noon
- **p.m.** = 12 hours after noon

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.

• Rounding

- To round a number to the nearest ten:
 1. Look at the ones place.
 2. Ask: Is it 5 or more? (5, 6, 7, 8, 9)
 - Yes → Add 1 to the tens.
 - No → The tens place stays the same.
 3. Replace the digit in the ones place with zero.

Examples: $6\bar{3} \rightarrow 60$ $6\bar{6} \rightarrow 70$

- To round dollars and cents to the nearest whole dollar:
 1. Look at cents. Is it 50¢ or more?
 - Yes → Add one to the dollar amount.
 - No → Keep the dollar amount the same.
 2. In both cases, drop the cents and the decimal.

Examples: $\$6.85 \rightarrow \7 $\$6.42 \rightarrow \6

Practice:

Round each number to the nearest ten.

1. $8\bar{3} \rightarrow$ _____ 2. $2\bar{9} \rightarrow$ _____ 3. $5\bar{5} \rightarrow$ _____

Round each amount of money to the nearest dollar. Remember to write the dollar sign in money problems.

4. $\$8.73 \rightarrow$ _____ 5. $\$6.28 \rightarrow$ _____ 6. $\$3.54 \rightarrow$ _____

7. $\$10.84 \rightarrow$ _____ 8. $\$18.46 \rightarrow$ _____ 9. $\$29.96 \rightarrow$ _____