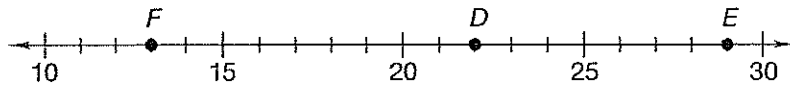Name _____

- **Number Line**
- **Thermometer**

- A **number line** shows numbers on a line in counting order.
- Thermometers show the temperature in degrees **Fahrenheit** (°F) or in degrees **Celsius** (°C).

Practice:

1. What numbers do points **D–F** represent?

```
        F                    D               E
  ←—+—+—+—●—+—+—+—+—+—+—+—●—+—+—+—+—+—●—+→
   10        15        20        25        30
```

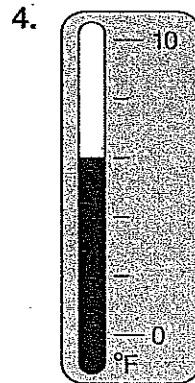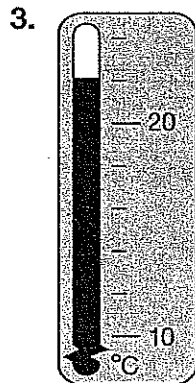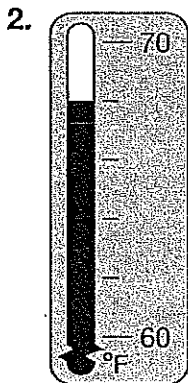**D.** _____   **E.** _____   **F.** _____

What temperature is shown on each thermometer?

2. _____ **3.** _____ **4.** _____ **5.** _____
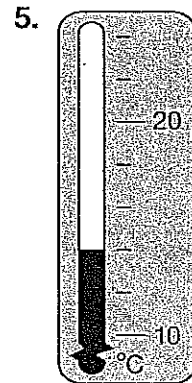
Mark each thermometer in **6–9** to show the given temperature.

6. 56°F   **7.** 28°C   **8.** 72°F   **9.** 14°C

Saxon Math Intermediate 3
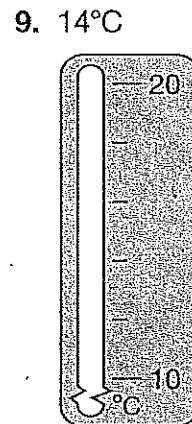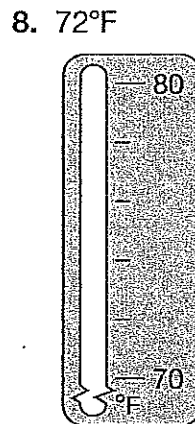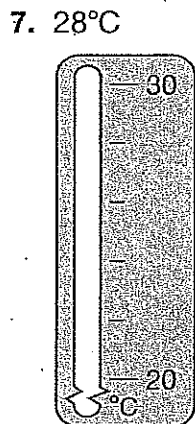
• Reading and Writing Numbers Through 999

- • We can use words to name numbers.
- • We write a hyphen between two number words that are combined to name a two-digit number. The number 78 is written "seventy-eight."

_____

Practice:

Use digits to write the numbers in problems 1 and 2.

1. six hundred fifty-four _____

2. seven hundred eight _____

Use digits and a dollar sign to write the amounts in problems 3 and 4.
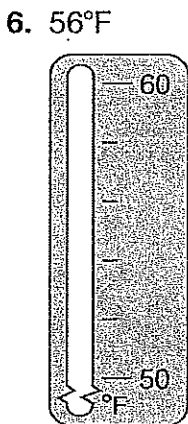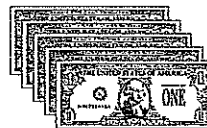
3. five hundred thirty-seven dollars _____

4. one hundred two dollars _____

Use words to write each amount in problems 5 and 6.

5. $648 _____

6. 706 _____

7. Write the amount of money shown using numbers and words.

_____

_____

8. There are 512 students at Clyde's school. Use words to write 512.

_____

_____

Name _____

• Adding Three-Digit Numbers

To add three-digit numbers:

    Step 1: Line up the addends by their place value.

    Step 2: Add the digits in the ones place.

    Step 3: Add the digits in the tens place.

    Step 4: Add the digits in the hundreds place.

Practice:

Add. You may use your money manipulatives.

1. $520 + $310 _____

2. 321 + 542 _____

3. 138 + 456 _____

4. $682 + $252 _____

5. How much money is seven $100
bills, four $10 bills, and twelve $1 bills? _____

6. How much money is five $10 bills,
twelve $1 bills, and two $100 bills? _____

Add.

7. 621 + 344 _____

8. $569 + $123 _____

9. 275 + 292 _____

10. 318 + 207 _____

11. $152 + $264 _____

12. 729 + 136 _____

Name _____

• Comparing and Ordering, Part 1

- We can compare numbers using a number line.
- We can compare numbers using place value.
- We use these symbols to show comparisons:

$$=$$ equal
$$>$$ greater than
$$<$$ less than

Practice:

Choose < or > to compare.

1. $53 ◯ $67

2. $81 ◯ $45

3. 64 ◯ 29

4. $235 ◯ $189

5. 38 ◯ 41

6. 12 ◯ 30

7. Which costs less, a basketball for
$19 or a baseball bat for $22? _____

8. Which costs more, a printer for
$139 or a computer for $721? _____

9. Write these numbers in order
from least to greatest: 68, 50, 87. _____

10. Write these numbers in order
from greatest to least: 234, 515, 375. _____

11. Amy has 184 nickels, 201 pennies, and 111 dimes in her bank. Write the number
of each kind of coin in Amy's bank in order from greatest to least.

_____

 Saxon Math Intermediate 3

Name _____

• Subtracting Three-Digit Numbers, Part 2

To subtract three-digit numbers:

      Step 1: Line up the digits by their place value.

      Step 2: Regroup if needed.

      Step 3: Subtract the digits in the ones place.

      Step 4: Subtract the digits in the tens place.

      Step 5: Subtract the digits in the hundreds place.

Practice:

Subtract using pencil and paper or money manipulatives.

1. $268
    − $122

2. $145
    − $128

3. $849
    − $281

4. $555
    − $225

5. $321
    − $251

6. $755
    − $329

7. Terrance saved $350 for school clothes. He spent $147 at one store. How much money did he have left? _____

8. Etta had $135. She paid $42 for 2 books and a CD. How much does she have left? _____

9. There are 618 students at Carla's school. On Tuesday, 132 students went on a field trip. How many students remained at school? _____

Name _____

• Column Addition

To add three or more two-digit numbers:

        Step 1: Arrange the numbers in a column.

        Step 2: Line up the digits by their place value.

        Step 3: Add the digits in the ones place. Regroup if necessary.

        Step 4: Add the digits in the tens place.

Practice:

Arrange in columns and add. You may use your money manipulatives.

1. 51 + 65 + 17 _____

2. $31 + $53 + $40 _____

3. $22 + $33 + $66 _____

4. 44 + 30 + 15 _____

5. Danny's mother bought him a new baseball glove, bat, and cleats. The glove costs $22. The bat cost $36. The cleats cost $39. How much did Danny's mother spend altogether? _____

Add.

6.	**7.**	**8.**	**9.**
26	$12	78	$32
44	$36	29	$55
+ 10	+ $48	+ 14	+ $12

Saxon Math Intermediate 3

• Reading and Writing Numbers Through 999,999

- When we read a number in the thousands, we first read the digits to the left of the comma, say "thousand" at the comma, and then name the digits to the right of the comma.
- When we write a number that is a thousand or more, we place a comma between the hundreds and thousands place.
- The number 2,657 written in words would be *two thousand, six hundred fifty-seven.*
- We can use expanded form to help read large numbers.
- The number 2,657 written in expanded form would be 2,000 + 600 + 50 + 7.

Practice:

1. Write these numbers with a comma.

   a. 32657 _____   b. 28954 _____

   c. 847123 _____   d. 258710 _____

2. Use words to write these numbers.

   a. 16,182 _____

   b. 26,493 _____

3. Use digits to write these numbers.

   a. seven thousand, six hundred twenty-two _____

   b. eighteen thousand, four hundred fifty _____

4. Compare.

   a. 69,457 ◯ 68,523   b. 5,999 ◯ 12,261
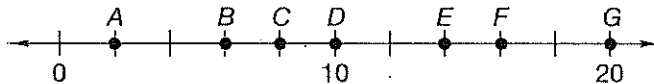
   c. 256,256 ◯ 256,562   d. 25,987 ◯ 25,897

Name _____

• More About Number Lines

- A **number line** shows numbers on a line in counting order.
- Tick marks on a number line follow a counting pattern.

Practice:

First fill in the blanks on the number line below. Then, use the number line to answer problems 1–7.

```
        A       B  C  D      E  F     G
    ┼───┼───┼───┼──┼──┼───┼──┼──┼───┼──┼──►
        0              10              20
```
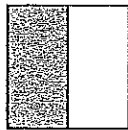
___ ___ ___ ___   ___ ___ ___ ___

1. What number does point *D* stand for? _____

2. What point stands for 14? _____

3. What number does point *F* stand for? _____

4. What point stands for 10? _____

5. What number does point *G* stand for? _____

6. What point stands for 2? _____

7. What number does point *B* stand for? _____
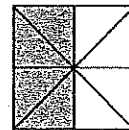
Saxon Math Intermediate 3

• Equivalent Fractions

- Equal fractions are called equivalent fractions.
- Each of the fractions shown are equal to $\frac{1}{2}$.

$$\frac{1}{2} \qquad \frac{2}{4} \qquad \frac{4}{8}$$

Practice:

You may use your fraction manipulatives for problems **1** and **2**.

1. Name a fraction equal to $\frac{1}{4}$. _____

2. Name a fraction equal to $\frac{2}{3}$. _____

3. Draw and shade two circles to show that $\frac{1}{3}$ is equal to $\frac{2}{6}$.

4. Draw and shade two squares to show that $\frac{1}{2}$ is equal to $\frac{3}{6}$.

Name _____

• Finding Fractions and Mixed Numbers on a Number Line

- Fractions can be used to name points on a number line.
- The denominator of each fraction is the total number of segments between 0 and 1. The numerator is the number of segments from 0.
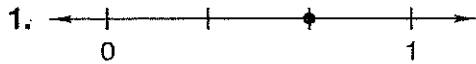

numerator   ⟶ $\dfrac{3}{5}$ ⟶ number of segments from 0

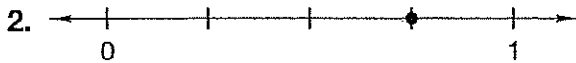denominator ⟶   ⟶ number of segments between 0 and 1

- Mixed numbers can also be located on a number line between two whole numbers.
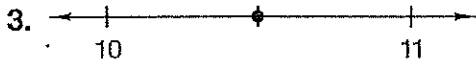

Practice:

Name the fractions and mixed numbers shown on these number lines.
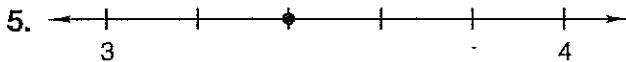
1.   _____

2.   _____

3.   _____

4.   _____

5.   _____

   Saxon Math Intermediate 3

• Equal Groups Stories, Part 1

- Stories about equal groups have a multiplication pattern.
- Multiplying the number of groups times the number in each group gives us the total.

number of groups × number in each group = total

Practice:

Write an equal groups number sentence for each problem. Then answer the questions.

1. There are 12 inches in each foot.
   How many inches are there in 4 feet?

   _____

2. There are 8 sides on an octagon. How many sides are there on 5 octagons?

   _____

3. Movie tickets cost $5 each for the matinee. How much would 6 tickets cost?

   _____

4. A classroom has desks arranged in 5 rows with 5 desks in each row. How many desks are in the classroom?

   _____
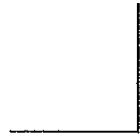
5. Jason mows lawns for $7 each. How much will he earn mowing 8 lawns?

   _____

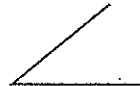## ° Angles

° An **angle** is an open figure with two sides that meet at a **vertex.**

° We can describe angles as **right, acute,** or **obtuse.**

right angle   acute angle   obtuse angle

Practice:
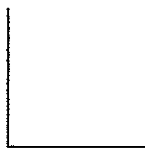
1. What kind of angle is larger than a right angle? _____

2. What kind of angle is smaller than a right angle? _____

3. What kind of angles are in a rectangle? _____

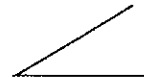4. Identify the angles below as acute, right or obtuse.

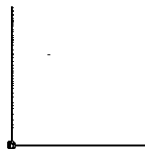   a.   b.   c.
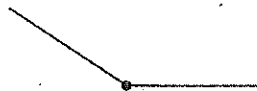
   _____   _____   _____

5. The angles below are marked with a dot at the point where the two sides meet.

   a. What is the name of the point
      where the sides of an angle meet? _____
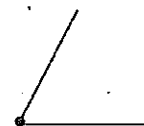
   b. Identify each angle below as acute, right, or obtuse.

   _____   _____   _____

Name _____

• Counting Cubes

To find the total number of cubes in a stack, we use three steps:

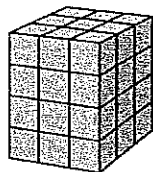   **Step 1:** Count the cubes in one layer.

    Step 2: Count the number of layers.

    Step 3: Combine by adding or multiplying.

Practice:

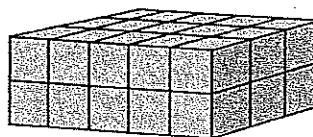1. The picture below shows a stack of cubes.

    a. How many cubes are in each layer? _____

    b. How many layers are there? _____

    c. How many cubes are there in all? _____

2. A box is filled with cubes as shown in the picture at right.

    a. How many cubes are in each layer? _____

    b. How many layers are there? _____

    c. How many cubes are there in all? _____

• Multiplying Multiples of Ten

- The **multiples of ten** are the numbers that we say when we count by tens.
- To multiply multiples of ten:

  Step 1: Multiply the digit in the tens place by the other factor.
  Step 2: Attach a zero to the product.

Practice:

Find each product.

1. 4×70 _____   **2.** 3×20 _____   **3.** 6×50 _____

4. 80×3 _____   **5.** 50×5 _____   **6.** 7×20 _____

7. 3×70 _____   **8.** 8×20 _____   **9.** 90×3 _____

10. Amy has nine $20 bills. How much money is that? _____

11. How much money is three $50 bills? _____

12. There are 30 pencils in a box. How
many pencils are there in 4 boxes? _____

Using Manipulatives to Divide by a One-Digit Number

We can use manipulatives and pictures to model division.

X X X X X
X X X X X
X X X X X $20 \div 5 = 4$
X X X X X

Practice

Use manipulatives or draw pictures to represent each problem. Then write the division using symbols and digits.

1. Twelve books are stacked in three equal piles. How many books are in each pile? _____

2. Fifteen books are put in stacks with 3 books in each stack. How many stacks of books are there? _____

3. Todd has 25 quarters. He made stacks with 5 quarters in each stack. How many stacks did he make? _____

4. Becki cut an 18-inch long ribbon into 6 equal pieces. How long was each piece of ribbon? _____

• Equal Groups Problems, Part 2

- We divide if we know the total and want to know the number of groups.
- We divide if we know the total and want to know the number in each group.

total ÷ number of groups = number in each group
total ÷ number in each group = number of groups

Practice:

Use multiplication and division facts to solve problems 1–5.

1. Lenny is stacking his coins. He has 80 pennies. He puts
   10 pennies in each stack. How many stacks will he have? _____

2. Marcus has 28 quarters. If he uses them to make
   7 stacks, how many quarters will be in each stack? _____

3. There were 36 students at baseball practice.
   They were divided into teams with 9 players
   on each team. How many teams were there? _____

4. Mr. Maguire wants his students to work in
   6 equal groups. He has 30 students in his
   class. How many students will be in each group? _____

5. Kerry ordered a baseball hat online. He
   received a message saying delivery would take
   28 days. How many weeks will he have to wait? _____

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