

NAME _____ DATE _____ PERIOD _____

1-1 Study Guide
Student Edition
Pages 4-7

Writing Expressions and Equations

If the cost of one CD is \$15 and you want to buy three CDs, you know that your total cost will be 15×3 , or \$45. The expression 15×3 is called a **numerical expression**.

You could use a letter such as n to represent the number of CDs you might buy. Then the expression $15 \times n$, or $15n$, would represent the cost of buying n CDs. The expression $15n$ is called an **algebraic expression** because it contains a variable. A variable such as n is a letter used to represent a number. You can use variables to write verbal expressions as algebraic expressions.

Verbal Expressions	Algebraic Expression
2 plus c c more than 2	$2 + c$
k minus 5 k decreased by 5	$k - 5$
two times x the product of 2 and x	$2x$
q divided by the sum of 6 and b the quotient of q and the sum of 6 and b	$\frac{q}{6 + b}$

Expressions do not contain equal signs, but tell only which operations to perform. Equations always contain an equal sign.

Example: Write an equation for each sentence.

a. Eight multiplied by 2 equals 16.
 $8 \times 2 = 16$

b. Three less than 7 times a number n is 24.
 $7n - 3 = 24$

Write an algebraic expression for each verbal expression.

1. the difference of r and 10 $r - 10$ "less than" flip order

2. increase the product of 3 and a by 1 $3 \cdot A + 1$ $10 - r$
 $or\ 3A + 1$

Write a verbal expression for each algebraic expression.

3. $\frac{p}{7}$ see notes

4. $2x + 5$

5. $\frac{1}{2}(4 + w)$ see notes

Write an equation for each sentence.

6. Seven minus a number z is the same as 15.

7. Ten more than twelve times a number h equals 25.

© Glencoe/McGraw-Hill 1 Algebra: Concepts and Applications

3) "the quotient of p and 7"
 "divide p by 7"
 " p divided by 7"

5) $\frac{1}{2} \cdot (4 + w)$

~~$\frac{1}{2} \cdot 4 + w$~~

"multiplying one half and four plus w"

"four plus w multiplied by one half"

$4 + (w \cdot \frac{1}{2})$

"multiply one half by the sum of w and four"

$\frac{1}{2} \cdot (w + 4)$

NAME _____ DATE _____ PERIOD _____

Practice Student Edition Pages 4-7

Writing Expressions and Equations
Write an algebraic expression for each verbal expression.

- the product of 6 and s
- five less than t
- g divided by 4
- 13 increased by y
- two more than the product of 7 and n
- the quotient of c and nine decreased by 3

Write a verbal expression for each algebraic expression.

- $r + 4$
- $8s$
- $\frac{t}{5}$
- $3n - 2$

Write an equation for each sentence.

- Thirteen decreased by n is equal to 9.
- Three times g plus five equals 11.
- Eight is the same as the quotient of 16 and x .
- Four less than the product of 6 and t is 20.

Write a sentence for each equation.

- $8 - p = 1$
- $6x + 3 = 21$
- $18 + c = 9$
- $\frac{2q}{4} = 3$ "Two multiplied by q divided by 4 is 3."
"The product of 2 and q divided by 4 is the same as 3."

© Glencoe/McGraw-Hill Algebra: Concepts and Applications



NAME _____ DATE _____ PERIOD _____

Study Guide

Student Edition
Pages 8-13

Order of Operations

Start
P
E
O
M
D
A
S
End

Read this sentence: *Jason said Leona is smart.* You need punctuation to tell you whether the sentence means *Jason said, "Leona is smart."* or *"Jason," said Leona, "is smart."*

The meaning of a mathematical expression such as $20 - 2 \times 3$ can also be confusing unless you know which numbers and operations should be grouped together. The order of operations at the right tells you that $20 - 2 \times 3$ means $20 - (2 \times 3)$ or 14.

Order of Operations

1. Find the values of the expressions inside grouping symbols, such as parentheses () and brackets [], and as indicated by fraction bars.
2. Do all multiplications and divisions from left to right.
3. Do all additions and subtractions from left to right.

*Fraction Bars LAST

Example 1: Find the value of $16 \div 8 \times 5$.
 $16 \div 8 \times 5 = 2 \times 5 = 10$

Multiply and divide from left to right.

Example 2: Find the value of $7(10 - 3)$.
 $7(10 - 3) = 7 \times 7 = 49$

Simplify within parentheses first.

Example 3: Find the value of $\frac{10 - (2 \times 3)}{5 \div 5}$.
 $\frac{10 - (2 \times 3)}{5 \div 5} = \frac{10 - 6}{5 \div 5} = \frac{4}{1} = 4$

Simplify within parentheses first.

Evaluate the numerator and the denominator separately.

Find the value of each expression.

- | | | |
|---------------------------|---|--------------------------------|
| 1. $3 + 4 - 2$ | 2. $6 + 3 \times 7$
6 + 21 → 27 | 3. $1 + 15 \div 5 \times 7$ |
| 4. $(7 + 6) \times 5$ | 5. $2 + 8 \times 3 - 1$ | 6. $\frac{7 + 1}{2}$ |
| 7. $(2 + 8) \times 3 - 1$ | 8. $\frac{12 + 6}{12 - 6} \rightarrow \frac{18}{6} \rightarrow 3$ | 9. $\frac{5 \times 4}{4 + 6}$ |
| 10. $5 \times (11 - 7)$ | 11. $\frac{7 - 5}{10 + 5} \rightarrow \frac{2}{15}$ | 12. $\frac{1 + 5}{2 \times 9}$ |



NAME _____ DATE _____ PERIOD _____

Practice

Student Edition
Pages 8-13

Order of Operations

Find the value of each expression.

- | | |
|--------------------------|------------------------------|
| 1. $16 \div 4 - 3$ | 2. $6 + 9 \cdot 2$ |
| 3. $3(8 - 4) \div 2$ | 4. $6 \cdot 2 \div 3 + 1$ |
| 5. $21 \div [7(12 - 9)]$ | 6. $\frac{7 + 5}{3 \cdot 2}$ |

Name the property of equality shown by each statement.

7. $4 + d = 4 + d$
8. If $\frac{x}{3} = 9$ and $y = 27$, then $\frac{27}{3} = 9$.
9. If $3c + 1 = 7$, then $7 = 3c + 1$.
10. If $8 - n = 3 + 1$ and $3 + 1 = 2 \cdot 2$, then $8 - n = 2 \cdot 2$.

Find the value of each expression. Identify the property used in each step.

- | | |
|--------------------------|-------------------------------|
| 11. $6(9 - 27 \div 3)$ | 12. $4(16 \div 16) + 3$ |
| 13. $5 + (3 - 6 \div 2)$ | 14. $8 \div 2 \cdot 7(9 - 8)$ |

Evaluate each algebraic expression if $s = 5$ and $t = 3$.

- | | |
|---------------------------|-------------------------------|
| 15. $3(2s - t)$ | 16. $\frac{4s}{t - 1}$ |
| 17. $s + 3t - 8$ | 18. $s - \frac{t}{3} \cdot 5$ |
| 19. $(s + t) - 2 \cdot 3$ | 20. $3s - 4t + 2$ |

1-3

NAME _____ DATE _____ PERIOD _____

Study Guide

Student Edition
Pages 14-18

Commutative and Associative Properties

Carlos makes salad dressings with olive oil and balsamic vinegar. Sometimes he adds the olive oil first and other times he adds the vinegar first. The salad dressing is always the same, so the **order doesn't matter**.

The order in which any two numbers are either added or multiplied doesn't change the sum or product. Addition and multiplication are said to be **commutative**.

Commutative Property of Addition	For any two numbers a and b , $a + b = b + a$.
Commutative Property of Multiplication	For any two numbers a and b , $a \cdot b = b \cdot a$.

Example 1: $3x + 4y + 5x = 3x + 5x + 4y = 8x + 4y$ Commutative (+)

Example 2: $5 \times 11 \times 2 = 5 \times 2 \times 11 = 10 \times 11 = 110$ Commutative (x)

You can also **regroup** numbers when you are adding or multiplying without changing the sum or product. Addition and multiplication are said to be **associative**.

Associative Property of Addition	For any numbers a , b , and c , $(a + b) + c = a + (b + c)$.
Associative Property of Multiplication	For any numbers a , b , and c , $(a \cdot b) \cdot c = a \cdot (b \cdot c)$.

Example 3: $(10 + 5) + 8 = 10 + (5 + 8) = 23$ Associative (+)

Example 4: $(100 \cdot 4) \cdot 5 = 100 \cdot (4 \cdot 5) = 2000$ Associative (x)

Associative (+)
Simplify each expression.

1. $(d + 7) + 3$ 2. $2x + 7 + 5x$ 3. $2 \times 7k \times 5$
 4. $(4a + 2b) + (a + b)$ 5. $7 \cdot y \cdot 3$ 6. $(8 \times m) \times 4$

Name the property shown by each statement.

7. $29 + b = b + 29$ 8. $2(4 \cdot 6) = (2 \cdot 4)6$

9. $(3 + 21) + 7 = (3 + 7) + 21$ 10. $42 \cdot 8 = 8 \cdot 42$ **Commutative (x)**

© Glencoe/McGraw-Hill 3 Algebra: Concepts and Applications

Practice

Student Edition
Pages 14-1

Commutative and Associative Properties

Name the property shown by each statement.

1. $43 + 28 = 28 + 43$ 2. $(9 + 5) + 4 = 9 + (5 + 4)$

3. $(8 \cdot 7) \cdot 11 = 8 \cdot (7 \cdot 11)$ 4. $12 \cdot 3 \cdot 6 = 3 \cdot 12 \cdot 6$ **Commutative (x)**

5. $(b + 22) + 3 = b + (22 + 3)$ 6. $c \cdot d = d \cdot c$

7. $2n + 13 = 13 + 2n$ 8. $15 \cdot (2g) = (15 \cdot 2) \cdot g$

Simplify each expression. Identify the properties used in each step.

9. $(m + 7) + 2$ 10. $4 \cdot x \cdot 8$

11. $12 + k + 5$ 12. $(y \cdot 3) \cdot 12$

13. $13 \cdot (3h)$ 14. $7 + 2q + 4$

15. $6n + (9 + 4) + 5$ 16. $(7 + p + 22)(9 \div 9)$ **see notes**

17. State whether the statement *Subtraction of whole numbers is associative* is true or false. If false, provide a counterexample.

$(4 - 7) - 5 = -3 - 5 = -8$ $4 - (7 - 5) = 4 - (2) = 2$

False

© Glencoe/McGraw-Hill 3 Algebra: Concepts and Applications

$$\begin{aligned}
 &16) (7 + p + 22)(9 \div 9) \\
 &(7 + 22 + p)(9 \div 9) \text{ commutative (+)} \\
 &[(7 + 22) + p](9 \div 9) \text{ Associative (+)} \\
 &(29 + p)(9 \div 9) \text{ Substitution} \\
 &(29 + p)(1) \text{ Substitution} \\
 &(29 + p) \text{ Multiplicative Identity} \\
 &p + 29 \text{ commutative (+)}
 \end{aligned}$$

NAME JMJ DATE _____ PERIOD _____

1-4 Study Guide Student Edition Pages 19-23

Distributive Property

Judi buys a cup of juice and a bagel for Hans and herself at the cafeteria. Juice costs \$1 and a bagel costs \$0.50.

To find the total, Judi finds the total for herself and doubles it. $2(\$1 + \$0.50)$ $= 2 \times \$1.50$ $= \$3$	To find the total, Hans finds the cost of 2 bagels and 2 juices and adds them. $2(\$1) + 2(\$0.50)$ $= \$2 + \1 $= \$3$
--	--

Judi and Hans find the same total.
 $2(\$1 + \$0.50) = 2(\$1) + 2(\$0.50)$.
 This is an example of the Distributive Property.

Distributive Property
 For all numbers a , b , and c ,
 $a(b + c) = ab + ac$ and
 $a(b - c) = ab - ac$

You can use the Distributive Property to simplify expressions.

Example 1: Simplify $3(x + y) + 4x$.
 $3(x + y) + 4x = 3x + 3y + 4x$ *Distributive Property*
 $= 3x + 4x + 3y$ *Commutative Property*
 $= 7x + 3y$ *Substitution Property*

Example 2: Simplify $7(m + p) + 2(m - p)$.
 $7(m + p) + 2(m - p) = 7m + 7p + 2m - 2p$ *Distributive Property*
 $= 7m + 2m + 7p - 2p$ *Commutative Property*
 $= 9m + 5p$ *Substitution Property*

Simplify each expression.

1. $3(u + v)$ <i>see notes</i>	2. $5(k - 2)$	3. $4(2 + 5s) + 3$
4. $7(1 - 2h)$	5. $1(a + 2j + 12k)$	6. $17(c - 2d)$
7. $15(ab + 3c)$	8. $4(2w + 3) + 2$	9. $2(a + 2b) + 3(2a - b)$
10. $7(x + 2y)$	11. $3(e - 4f - ef)$ <i>see notes</i>	12. $2(3m + 1) + 4m$

© Glencoe/McGraw-Hill 4 Algebra: Concepts and Applications

$$\begin{array}{l} 1) \quad 3(u + v) \\ \quad \quad 3 \cdot u + 3 \cdot v \\ \quad \quad \boxed{3u + 3v} \end{array}$$

$$\begin{array}{l} 11) \quad 3(e + 4f + ef) \\ \quad \quad 3e + 3 \cdot (-4f) + 3(-1ef) \\ \quad \quad \quad \quad \quad \quad (3)(-1) ef \\ \quad \quad \boxed{3e + -12f + -3ef} \end{array}$$

NAME _____ PLACED _____

Practice Student Edition
Pages 19-22

Distributive Property
Simplify each expression.

- $3t + 8t$
- $7(w + 4)$
- $8c + 11 - 6c$
- $2(3n - n)$
- $5(2r + 3)$
- $4(6 - 2g)$
- $15d - 9 + 2d$
- $(7q + 2z) + (q + 5z)$
see notes
- $24b - b$
- $6 + 2rs - 5$
- $9(f + g)$
- $8x + 2y - 4x - y$
- $(3a + 2)7$
see notes
- $5(2m - p)$
- $3(2 - k)$
- $9(2n + 4)$
- $12s - 4t + 7t - 8s$
- $4(2a - 3b)$
- $(5m + 5n) + (6m - 4n)$
see notes
- $8 + 5z - 6 + z$
see notes
- $2(4x + 3y)$
- $(hg - 1)7$
- $13st + 5 - 9st$
- $8 + 2r + 9$
- $w + 10 - 4 + 6w$
- $3(6 + c - 4)$
- $4(2f - g)$
- $2(7q + 3r + 1g)$
see notes

© Glencoe/McGraw-Hill Algebra: Concepts and Applications
4 $8q + 3r + 2$

$$8) \quad (7q + 2z) + (q + 5z)$$

$$(7q + q) + (2z + 5z)$$

$$8q + 7z$$

$$13) \quad (3A+2) \cdot 7$$
$$7 \cdot (3A+2) \quad \text{Commutative Prop.}$$
$$\boxed{21A + 14}$$

$$19) \quad (5m + 5n) + (6m - 4n)$$
$$\underbrace{(5m + 6m)} + \underbrace{(5n - 4n)} \quad \begin{array}{l} \text{Commutative} \\ (+) \end{array}$$
$$\underbrace{\hspace{10em}} \quad \begin{array}{l} \text{Associative} \\ (+) \end{array}$$
$$11m + 1n \quad \begin{array}{l} \text{Substitution} \\ (2x) \end{array}$$

20)

$$\textcircled{8} + \textcircled{52} - \textcircled{6} + \textcircled{2}$$

$$\underbrace{52 + 2} + \underbrace{8 - 6}$$

$$\boxed{62 + 2}$$

$$\cancel{\textcircled{82}}$$

1-5 NAME _____ DATE _____ PERIOD _____
Study Guide Student Edition
 Pages 24-29

A Plan for Problem Solving

A problem-solving plan can help you identify and organize the information in a problem, then plan and execute a solution. A problem-solving plan should include these steps.

1. **Explore** Read the problem carefully. Identify the information that is given and determine what you need to find.
2. **Plan** Select a strategy for solving the problem. If possible, estimate what you think the answer should be before solving the problem.
3. **Solve** Use your strategy to solve the problem. You may have to choose a variable for the unknown, and then write an expression.
4. **Examine** Check your answer. Does it make sense? Is it reasonably close to your estimate?

Example: A tree in your yard grows 7 inches a year and is now 92 inches tall. In about how many years will the tree be 122 inches tall?

Explore: The tree is already 92 inches tall and it grows 7 inches a year. You need to find how many years it will take the tree to grow to 122 inches.

Plan: Since the tree needs to grow about 30 more inches and $30 \div 7 \approx 4$, you can estimate that it will take more than 4 years for the tree to reach 122 inches.

Solve:

Number of Years From Present	Height of Tree in Inches
1	$92 + 7 = 99$
2	$99 + 7 = 106$
3	$106 + 7 = 113$
4	$113 + 7 = 120$
5	$120 + 7 = 127$

Examine: Your table shows you that the tree will be 122 inches in a little over 4 years. Since the answer matches your estimate, the answer is reasonable.

Solve the problem.
 Janine is selling subscriptions to an Internet service. She began by selling one subscription the first day. On the second day she sold two more subscriptions, and on the third day she sold 3 more. If she continues to sell subscriptions according to this pattern, how many will she have sold at the end of one week?

1-5

NAME _____ DATE _____ PERIOD _____

Practice

Student Edition
Pages 24-26

A Plan for Problem Solving

Solve each problem. Use any strategy.

1. Tara read 19 science fiction and mystery novels in 6 months. She read 3 more science fiction novels than mystery novels. How many novels of each type did she read?
2. Gasoline costs \$1.21 per gallon, tax included. Jaime paid \$10.89 for the gasoline he put in his car. How many gallons of gasoline did he buy?
3. A coin-operated telephone at a mall requires 40 cents for a local call. It takes quarters, dimes, and nickels and does not give change. How many combinations of coins could be used to make a local call?
4. Together, Jason and Tyler did 147 sit-ups for the physical fitness test in gym. Jason did 11 fewer sit-ups than Tyler. How many sit-ups did each person do? *see notes*
5. The perimeter P of a square can be found by using the formula $P = 4s$, where s is the length of a side of the square. What is the perimeter of a square with sides of length 19 cm? *see notes*
6. Mrs. Hernandez wants to put a picture of each of her 3 grandchildren on a shelf above her desk. In how many ways can she line up the pictures?
7. Leona is 12 years old, and her sister Vicki is 2 years old. How old will each of them be when Leona is twice as old as Vicki?
8. Gunther paid for 6 CDs at a special 2-for-1 sale. The CDs that he got at the sale brought the total number of CDs in his collection to 42. How many CDs did he have before the sale?
9. Phil, Ron, and Felix live along a straight country road. Phil lives 3 miles from Ron and 4 miles from Felix. Felix lives closer to Ron than he does to Phil. How far from Ron does Felix live? *see notes*
10. Gere has 3 times as many shirts with print patterns as he does shirts in solid colors. He has a total of 16 shirts. How many shirts in print patterns does he have? *see notes*

© Glencoe/McGraw-Hill

5

Algebra: Concepts and Applications

$$4) \text{ Tyler did } \underline{79} \text{ sit-ups.}$$

$$\text{Jason did } \underline{68} \text{ sit-ups.}$$

Jason did 11 fewer than Tyler $\rightarrow J = T - 11$
 Together they did 147. $J + T = 147$

$$J = \underline{T - 11} \text{ substitute}$$

$$J + T = 147$$

$$(T - 11) + T = 147$$

$$T + T - 11 = 147$$

$$2T - 11 = 147$$

$$\begin{array}{r} 2T - 11 = 147 \\ + 11 \quad = +11 \\ \hline 2T = 158 \\ \underline{2} \quad \quad \underline{2} \\ T = 79 \end{array}$$

$$T = 79 \text{ situps}$$

$$J = T - 11 = (79) - 11 = 68 \text{ situps}$$

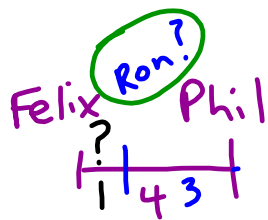
5) 76 cm is the perimeter of a square with sides of length 19 cm.

$$P = 4s \quad \begin{array}{l} s = \text{side length} \\ P = \text{Perimeter} \end{array}$$

$$P = 4(19) \quad \begin{array}{r} 3 \\ 19 \\ \times 4 \\ \hline 76 \end{array}$$

$$P = 76 \text{ cm}$$

9) Felix lives 1 mile from Ron.



* Felix lives closer to Ron

10) He has 12 shirts in print patterns.

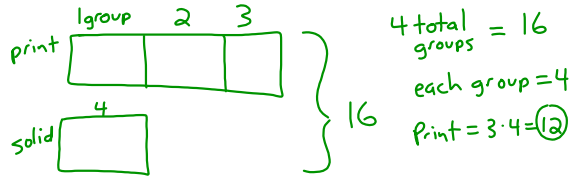
16 total shirts

3 times as many print than solid

solid	print	total
1	3	4
2	6	8
3	9	12
4	12	16

$x = \text{solid}$ $3x = \text{print}$
 $x + 3x = 16$ $3(4) = 12$
 $4x = 16$
 $\frac{4x}{4} = \frac{16}{4}$
 $x = 4$

alternate method



1-6

NAME _____ DATE _____ PERIOD _____
Study Guide
 Student Edition
 Pages 32-37

Collecting Data

A large ski area surveyed 50 skiers to find out how long they waited in a lift line during a busy period. Their responses are in the chart below.

Time in Lift Line (minutes)																			
20	23	20	16	25	26	18	18	19	21	25	24	20	22	19	15	23	22	22	19
18	24	23	16	18	17	17	24	23	23	15	12	23	21	25	24	15	23	24	17
23	22	24	16	16	20	19	23	21	26										

A frequency table is one way to organize data so you can draw conclusions more easily from the data. In a frequency table, you use tally marks to record how frequently events occur.

Example: Make a frequency table to organize the survey data. Waiting times vary from 12 minutes to 26 minutes. If you group the waiting times in sets of three, your table will not be too long. The groups are called *intervals*. This table has intervals of three minutes. Each result from the survey is recorded in the tally chart. The total number of tallies is recorded in the Frequency column.

** intervals must be evenly spaced*

Lift Line Wait		
Time (min)	Tally	Frequency
12-14		1
15-17	###	10
18-20	### ##	12
21-23	### ##	16
24-26	### ##	11

Make a frequency table to organize the data in the table. Use intervals of \$4.

Profits (\$)					
92	95	94	91	100	101
90	90	92	105	101	102
99	94	100	95	93	92
102	103	91	97	105	92

Profits (\$)	Tally	Frequency
90-93	### IIII	9
94-97	###	5
98-101	###	5
102-105	###	5

Collecting Data

Determine whether each is a good sample. Describe what caused the bias in each poor sample. Explain.

1. Every third person leaving a music store is asked to name the type of music they prefer.
2. One hundred students at Cary High School are randomly chosen to find the percentage of people who vote in national elections.
3. Two out of 25 students chosen at random in a cafeteria lunch line are surveyed to find whether students prefer sandwiches or pizza for lunch.

No, the sample is not large enough and it does not include students who brought their lunch.

Refer to the following chart.

Favorite Leisure Activity									
S	R	C	C	S	R	R	C	S	C
M	S	C	C	C	M	C	C	S	R
S	S	R	M	M	C	M	S	C	R

C = computer games, M = movies, R = reading, S = sports

4. Make a frequency table to organize the data.
5. What is the most popular leisure activity?
6. How many more people chose sports over reading?
7. Does the information in the frequency table support the claim that these people do not get enough exercise? Explain.

Refer to the following chart.

Number of Breakfasts Eaten Per School Week									
0	5	3	2	0	2	1	3	4	2
5	1	3	2	1	3	1	3	4	1
0	2	3	5	5	2	3	4	1	3

8. Make a frequency table to organize the data.
9. How many students eat breakfast fewer than 3 times per week?
10. Should the school consider a campaign to encourage more students to eat breakfast at school? Explain.

Displaying and Interpreting Data

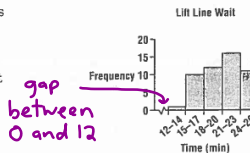
Data can be easier to analyze if they are presented in the form of a graph. There are many ways to graph data, such as line graphs, histograms, and stem-and-leaf plots. A histogram is a graph of the data in a frequency table.

↳ special kind of bar graph

Example: The frequency table shows the amount of time skiers waited in a lift line. Construct a histogram for the data.

Lift Line Wait		
Time (min)	Tally	Frequency
12-14		1
15-17		10
18-20		12
21-23		16
24-26		11

- The horizontal axis displays the time intervals from the table.
- The vertical axis displays equal intervals of 1.
- For each time interval, draw a bar. The height of the bar is equal to its frequency.
- Label the two axes and title the histogram.



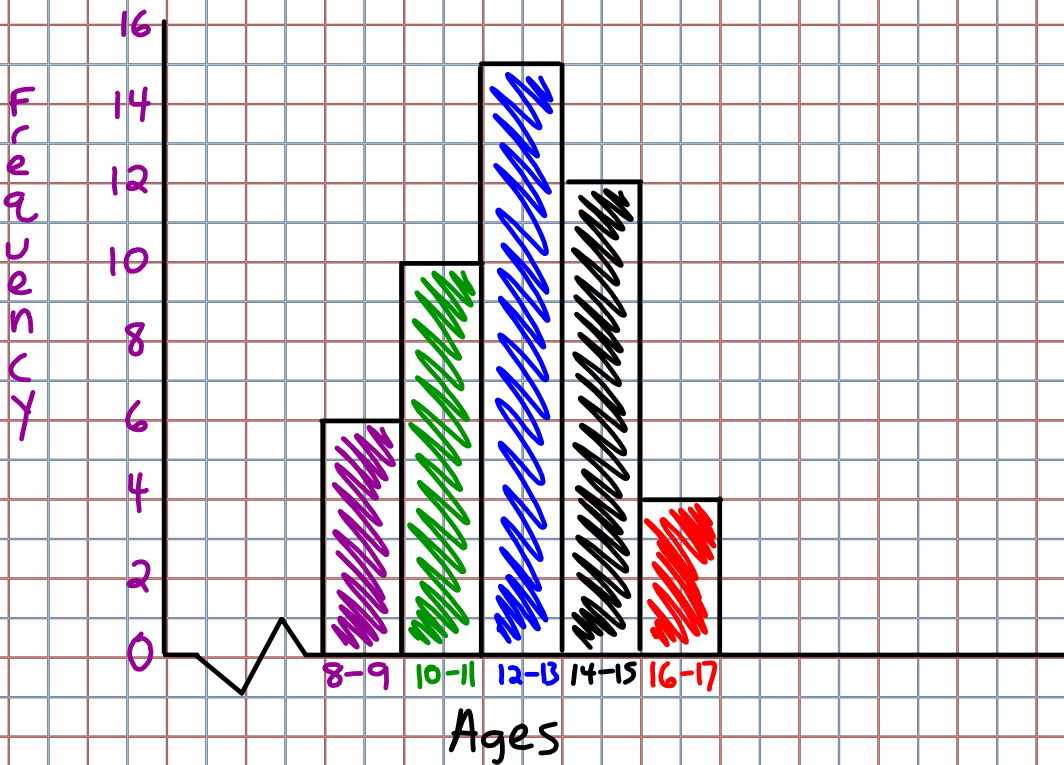
Make a histogram of the data in the frequency table.

Students Visiting Museum		
Ages	Tally	Frequency
8-9		6
10-11		10
12-13		15
14-15		12
16-17		4

see notes

p.7)

Students Visiting Museum



NAME _____ DATE _____ PERIOD _____
Practice

Student Edition
 Pages 38-43

Displaying and Interpreting Data

Use the table below for Exercises 1-4.

Year	U.S. Population
1960	179.3 million
1970	203.3 million
1980	226.5 million
1990	248.7 million

1. Make a line graph of the data. Use the space provided at the right. *see notes*
2. For which ten-year interval was population growth the greatest? *1960-1970*
3. Describe the general trend in the population. *The general trend is a steady increase every 10 years.*
4. Predict the U.S. population for the year 2000. *A reasonable estimate for the U.S. population by the year 2000 is 270 million.*

Use the table at the right for Exercises 5-8. In each age group, 100 people were surveyed.

Age Group	Number
10-19	10
20-29	15
30-39	35
40-49	40
50-59	25

5. Make a histogram of the data.
6. Which age group listens to country music the least?
7. How many respondents in the 40-49 age group listen to country music?
8. Suppose most listeners for a radio station are in their twenties. Should the station play a lot of country music? Explain.

Refer to the stem-and-leaf plot at the right.

9. What were the highest and lowest scores?
10. Which test score occurred most frequently? *83*
11. In which 10-point interval did most of the students score?
12. How many students scored 75 or better? *14*
13. How many students received a score less than 75?

(tens) Stem	Leaf (units)
5	6 7 7 8
6	1 4 9
7	3 4 5 5 7 8
8	1 3 3 3 6 9
9	0 1 2 4

7 | 5 = 75

1)

U.S. Population

