UNIT 9

Measurement

Alaskan Math Standards (GLE's) for This Unit

These Alaskan math standards underly the language development of the unit. Many of these standards are addressed during the regular math program and in the concrete introduction of the key vocabulary words for the unit.

The student demonstrates understanding of measurement techniques by

[7] MEA-3 applying a given scale factor to find missing dimensions of similar figures (M2.3.4)

[7] MEA-4 measuring various dimensions to one-sixteenth of an inch or millimeter (M2.3.1)

[7] MEA-5 accurately measuring a given angles using a protractor to the nearest plus or minus 2 degrees (M2.3.1)

[7] MEA-6 solving real-world problems involving elapsed time between world time zones (M2.3.5)

Alaskan Language Standards (GLE's) for This Unit

AK.R.3.1. Reading: The student uses strategies to decode or comprehend the meaning of words in texts. (E.B.1)

[7] 3.2.2. Reading aloud short factual information (e.g., reports, articles) (L)

AK.R.3.3. Reading: The student restates/summarizes and connects information. (E.B.3)

AK.R.3.5. Reading: The student follows written directions. (E.C.2)

[7] 3.5.1. Completing a task by following written, multi-step directions (e.g., answer a multi-faceted text question) (L)

[7] 3.5.2. Identifying the sequence of steps in a list of directions (e.g., what is the first step, what is the second step)
[7] 3.3.4. Applying rules of capitalization (e.g., titles and proper nouns)

AK.W.3.4. Writing: The student revises writing. (E.A.5, E.A.8)

AK.E.A. A student should be able to speak and write well for a variety of purposes and audiences. A student who meets the content standard should:

E.A.1. Apply elements of effective writing and speaking. These elements include ideas, organization, vocabulary, sentence structure, and personal style.

E.A.2. In writing, demonstrate skills in sentence and paragraph structure, including grammar, spelling, capitalization, and punctuation.

E.A.3. In speaking, demonstrate skills in volume, intonation, and clarity.

INTRODUCTION OF MATH VOCABULARY

Measurement

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

SCALE

***Show the students a toy car (or other toy model). Relate it to the actual item. If possible, tell the students the ratio of the model to the real thing. For example, (1:10) for 1 inch to 10 inches. Show the students a map; use it to reinforce the concept of* scale.**

DATA

Place a number of canned green beans in a bowl. Have each student select one bean; the students should open their beans and count the number of seeds inside. Record the* data *on the chalkboard, indicating the total number of seeds found. Have the students determine the* average *number of seeds found (review from unit 4).

WHOLE NUMBER

Lay a number of* whole *and partial cookies in front of the students. Have them locate the whole cookies. Use this to introduce whole numbers. The students should understand that those cookies that are not whole are fractions of the whole.

Measurement

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

DEGREE

Show the students a wall clock that has moveable hands. As they watch, rotate the hour hand from 12 completely around to 12 again. Use this to introduce* degrees *to the students. They should understand that there are 360° in a circle. As the students watch, open a book to 180° (half open). Use the book to demonstrate 90°.

SIMILAR

Collect small and large cans of food. The cans should all be the same shape. Use the cans to lead the students to the concept of similar as it relates to shapes. Identify other* similar *items in the classroom (i.e. books, glasses, etc.).

TIME ZONE

Have a student hold a basketball in front of the class. Use a flashlight to represent the sun, shining on the earth (the ball). Have the student rotate the ball to represent the parts of the earth that have daylight and those that have night. Mount a map of the world on the board. Outline the 24 time zones on the map, noting the Alaska time zone in particular.

Measurement

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

PARENTHESES

Introduce a few food containers to the students (i.e. a bag, box, and can). Lead the students to understand that all of the containers contain the foods within them. Lead this to the* math container — parentheses. *Demonstrate the use of parentheses as* containers *that hold or group things together (i.e. (4,5), 4x(5+2), etc.).

DIMENSIONS

Obtain two chocolate bars of the same make but different sizes (i.e. a regular bar and a mini bar of the same chocolate). Use this to draw the students' attention to the dimensions of the chocolate bars. Show samples of other* dimensions *that reflect width, depth, and height.

PROTRACTOR

Show a number of common items used to measure different things (i.e. a meat thermometer, a ruler, a measuring tape, etc.). Have the students suggest what is the same about all of the items. Lead them to suggest that they all* measure *something. Introduce the* protractor *as an instrument for measuring degrees. Show the students how to use the protractor.

VOCABULARY PICTURES

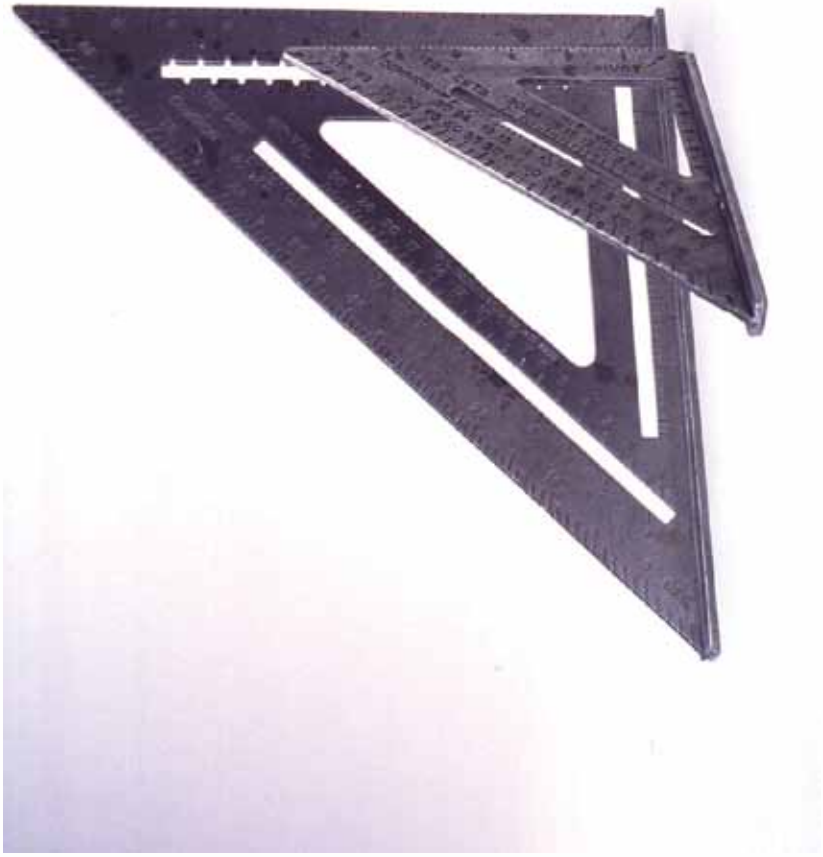
SCALE


Hemera

DATA

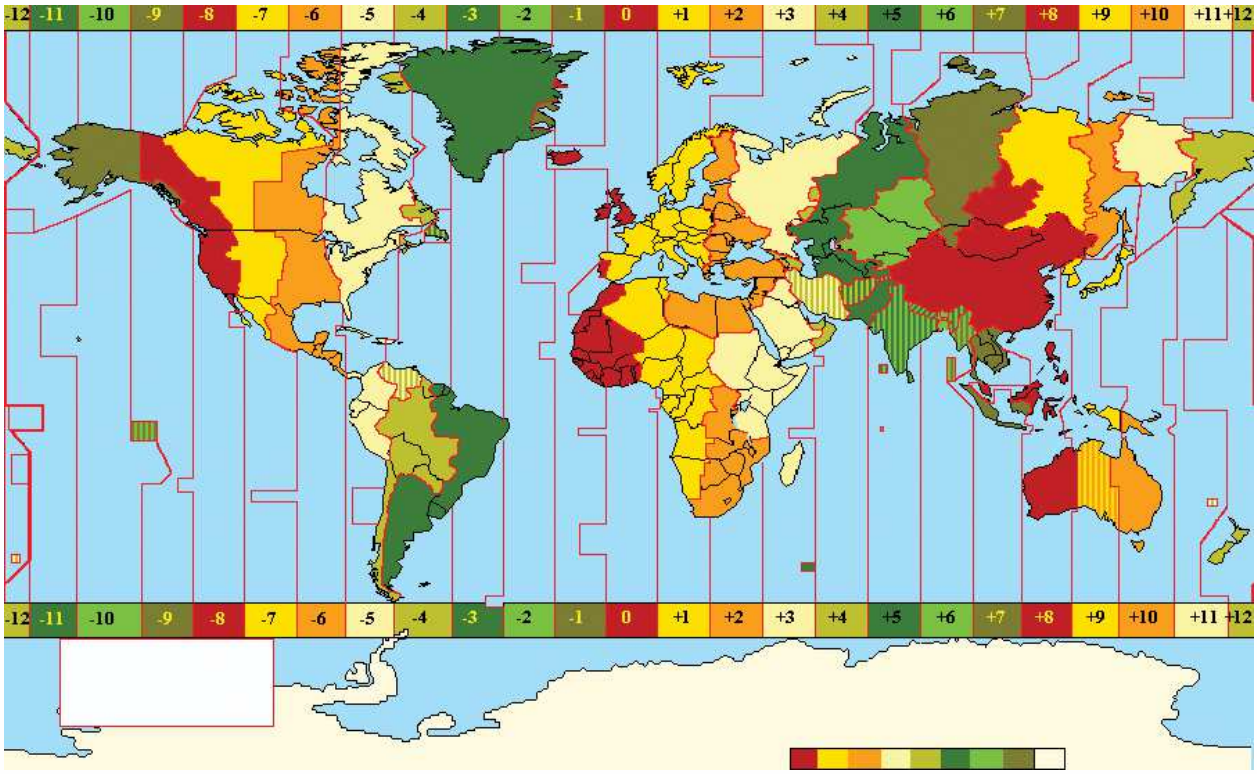

12

WHOLE NUMBER



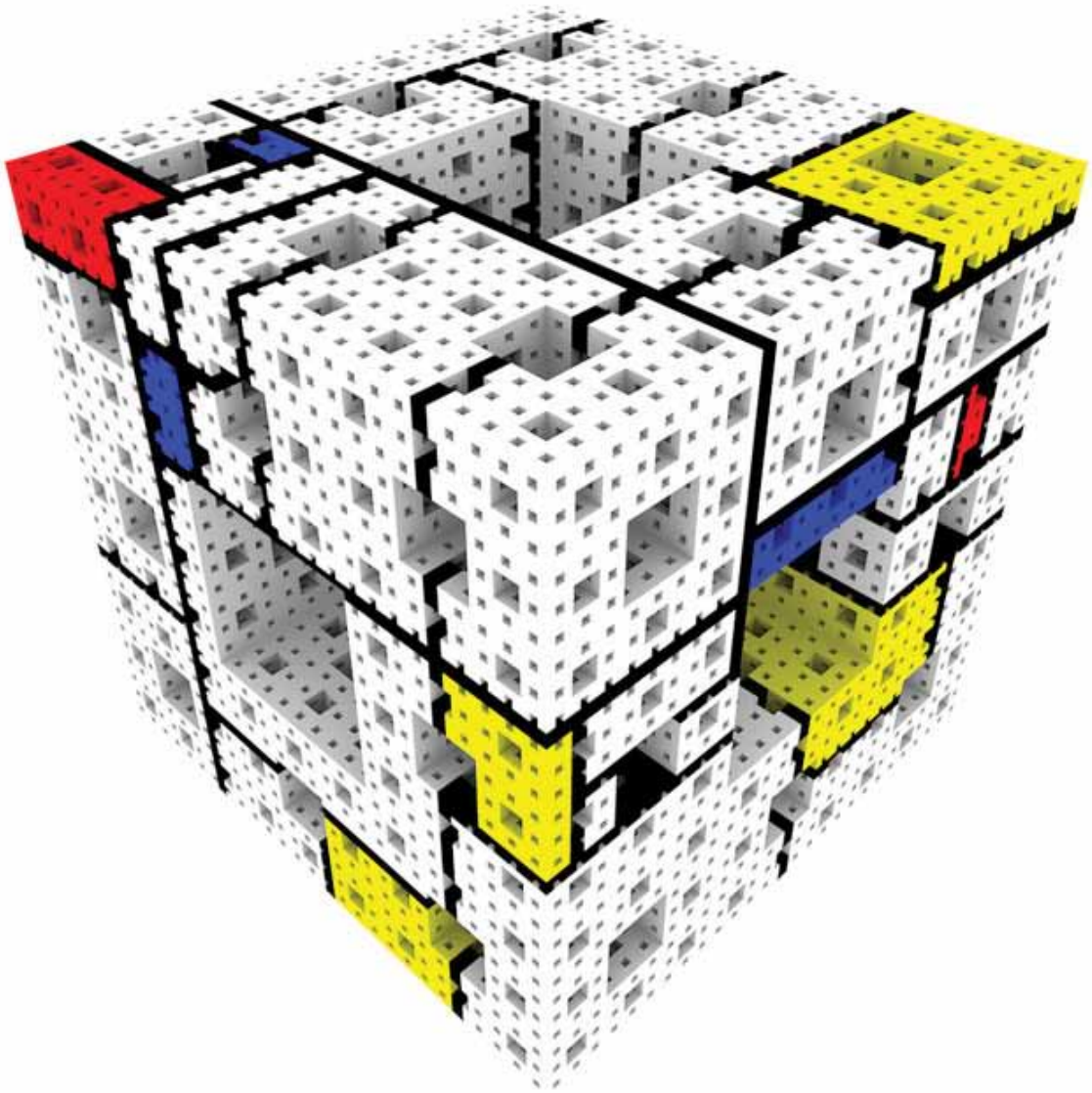
DEGREE

SIMILAR

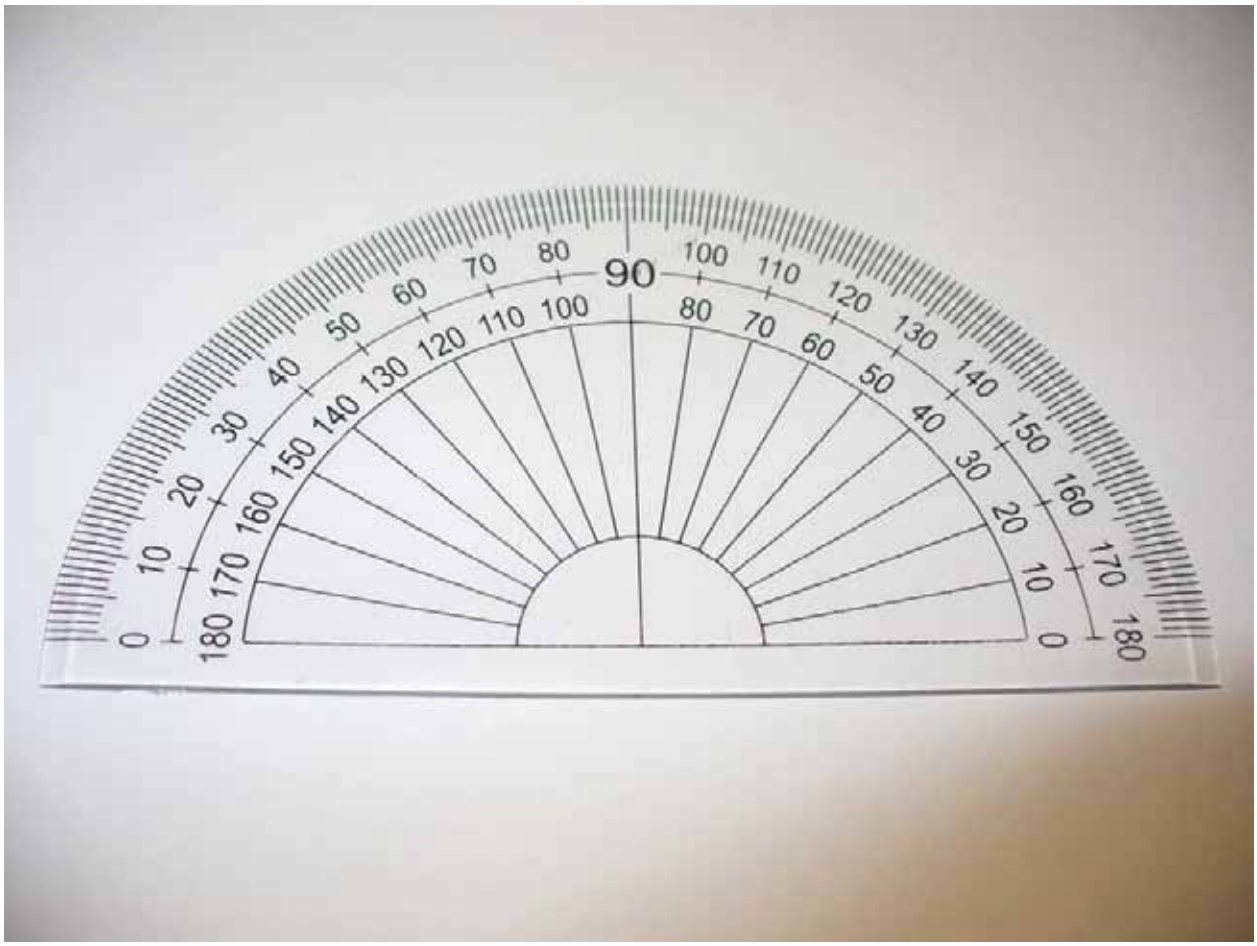

-12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12
-12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10 +11 +12

TIME ZONE

PARANTHESES



DIMENSIONS


90
0
10
20
30
40
50
60
70
80
100
110
120
130
140
150
160
170
180

PROTRACTOR

LANGUAGE ACTIVITIES

Language and Skills Development

LISTENING

Review the key math words introduced in this unit. If the vocabulary pictures were not presented during the introduction, show them to the students at this time.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Airplane Land

Scatter the vocabulary pictures on the floor. Have the students sit in a large circle around the pictures. Prepare two paper airplanes. Give the airplanes to two students. Say one of the vocabulary words. The students should toss their airplanes, attempting to land them on the picture for the vocabulary word you said. Repeat until all students have participated.

Stare

Group the students into two teams. Tape the vocabulary graphics to a sheet. Have two students hold the sheet vertically so that the players in each team can see the graphics. Have the first player from each team stand behind the sheet. Give these two players flashlights. Say a vocabulary word. When you say "Go," the two players must shine the lights of their flashlights through the sheet. The players should move the lights around on the surface of the sheet. When a player's light is behind the graphic for the vocabulary word you said, the players in his/her team should clap. The player who first reaches the vocabulary graphic in this way wins the round. Repeat until all players in each team (and the two players holding the sheet) have had an opportunity to participate.

Knock Knees

Mount the vocabulary pictures on the board. Group the students into two teams. Give a small, hard ball to the first player in each team. The first player in each team must place the ball between his/her knees. Say a vocabulary word. When you say "Go," the two players must then walk to the pictures without losing the balls. The first player to reach the vocabulary pictures and identify the picture for the word you said wins the round. If a player loses his/her ball, he/she must return to his/her team and begin again. Repeat until all players have played.

Language and Skills Development

Join Those Halves

Make an extra set of vocabulary pictures. Cut each of the vocabulary illustrations in half. Spread the illustration halves on the floor in a scattered form. Group the students into two teams. Give the first two players in each team a long length of string or yarn. Say a vocabulary word. When you say "Go," the first two players in each team must rush to the illustration halves. The object of the activity is for the players to use the string/yarn to join together the two halves which make up the illustration for the word you said. The first pair of players to do this successfully wins the round. Repeat until all players have participated.

Over and Under

Group the students into two teams. Mount the vocabulary pictures on the board. Give the first player in each team a ball. When you say, "Go," the first player in each team must pass the ball to the next player, over his/her head. The next player must then pass the ball to the third player, between his/her legs. The players should continue with this over/under sequence until the last player in a team receives the ball. When the last player receives the ball, he/she must rush to the board and identify a picture for a vocabulary word that you say. The first player to do this successfully wins the round. Repeat until all players in each team have had a chance to respond in this way.

Whisper

Mount the vocabulary illustrations on the chalkboard. Group the students into two teams. Whisper a vocabulary word to the first player in each team. When you say "Go," the first player in each team must then whisper the same word to the next player in his/her team. The players should continue whispering the vocabulary word in this way until the last player in a team hears the word. When the last player in a team hears the word, he/she must rush to the chalkboard and point to the illustration for the word. The first player to do this correctly wins the round. Repeat until all players have had an opportunity to identify a vocabulary illustration in this way. When a player has identified a vocabulary illustration, he/she should rejoin the front of his/her team.

Language and Skills Development

SPEAKING

Right or Wrong?

Mount the vocabulary pictures on the board. Point to one of the pictures and say its vocabulary word. The students should repeat the vocabulary word for that picture. However, when you point to a picture and say an incorrect vocabulary word for it, the students should remain silent. Repeat this process until the students have responded a number of times to the different vocabulary pictures.

The Disappearing Pictures

Mount five or six pictures on the board, vertically. Point to the picture at the top and tell the students to name it. Continue in this way until the students have named all of the pictures from top to bottom. Then, remove the last picture and repeat this process—the students should say all of the vocabulary words, including the name for the "missing" picture. Then, remove another picture from the board and have the students repeat this process. Continue in this way until the students are saying all of the vocabulary words from a blank board or until the students cannot remember the "missing pictures."

Sheet Golf

Before the activity begins, obtain an old sheet. Cut a hole (approximately two inches in diameter) in each end of the sheet. Group the students into two teams. Have the first player from each team hold opposite ends of the sheet. Place a marble or small ball in the center of the sheet. When you say "Go," the players must then lift their ends of the sheet and attempt to cause the marble or ball to fall through the hole in the other player's side of the sheet. When the ball or marble falls through one of the holes, the player on that side of the sheet must say the name of a vocabulary picture you show or he/she should repeat a sentence you said at the beginning of the round. Repeat with other pairs of students until all students have participated. If the sheet is large enough, all students can play—divide the students into four groups (one group for each side). Cut a hole in the sheet near each side. When the marble or ball falls through, all the players on that side must say the name of a vocabulary picture that you show. Repeat.

Language and Skills Development

Slip String

Mount the vocabulary pictures on the board. Join all of the students together with a long length of string. Before tying the ends of the string together, insert a roll of tape over one end of the string (a large washer can also be used). Then, tie the ends of the string together. Face away from the students. The students should then pass the roll of tape as quickly as possible along the string. When you clap your hands, the student who is holding the roll of tape, must identify (orally) a vocabulary picture you point to. For added motivation, you may wish to place more than one roll of tape (or washer) on the line of string. Repeat until many students have responded.

Picture Jigsaw

Cut each of the vocabulary pictures into four pieces. Mix the cut out pieces together and distribute them to the students (a student may have more than one picture section). When you say "Go," the students should attempt to match the jigsaw sections they have to reproduce the original vocabulary pictures. When the students put the necessary pieces of a picture together, they should identify the picture by its vocabulary word. Continue until all vocabulary pictures have been put together and named in this way.

Colander

Before the activity begins, obtain a sheet of construction paper equal in size to the size of your vocabulary pictures. Use a single hole punch to punch holes in the sheet. Place the sheet over one of the vocabulary pictures. Hold the sheet and vocabulary picture up so that the students can see them. The students should attempt to identify the vocabulary picture from the parts they can see through the holes in the construction paper. The first student to do this correctly wins the round. This activity may also be done in team form. In this case, the first player to correctly identify the vocabulary picture wins the round.

Language and Skills Development

READING

Introduce the math sight words to the students — match the sight words with the vocabulary graphics. The sight words are included in the Student Support Materials, attached to these lesson plans.

Sight Recognition

Balloon Burst

Before the activity begins, write sight words on small strips of paper. Roll each strip of paper and insert it into a balloon. Inflate each balloon and tie its end. Group the students into two teams. Have the teams sit on the floor in two lines, facing one another, with legs outstretched. The members of each team should sit as close together as possible. Place one of the balloons between the feet of the first player in each team. When you say "Go," the players in each team must pass the balloon to the person next to them, using only their feet. When the last player receives the balloon, he/she must remove it from between his/her feet and then sit on it to burst it. When the balloon has popped, the student must retrieve the sight word strip and read it to the other students. The first team to complete this sequence correctly wins the round. Repeat until all or many of the students have responded.

Face

Mount the sight words around the classroom on the walls, board, and windows. Group the students into two teams. Give the first player in each team a flashlight. Darken the classroom, if possible. Say one of the sight words. When you say "Go," the students should turn their flashlights on and attempt to locate the sight word you said. The first player to do this correctly wins the round. Repeat until all players in each team have participated.

Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Decoding/Encoding

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut-out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

Language and Skills Development

Whispered Syllables

Group the students into two teams. Mount the sight word cards on the chalkboard. Whisper a syllable from one of the sight words to the first player in each team. When you say "Go," the first player in each team must whisper the same syllable to the next player in the team. The players should continue to whisper the syllable in this way until the last player in the team hears it. When the last player hears the syllable, he/she must rush to the chalkboard and point to a sight word that contains that syllable. Repeat this process until all players have had an opportunity to identify a sight word in this way.

Fancy Foot

Cut each of the sight words into its individual letters/syllables. Mix all of the letters/syllables together. Have the students stand side by side, in a straight line (depending upon the number of students in your class, you may wish to select a group of students for this activity). Tape a cut out letter/syllable to one of each student's feet so that he/she can read it. When each student has a letter/syllable taped to one of his/her feet in this way, say a sight word. The students who have the letters/syllables on their feet for the sight word you said, should then encode the sight word by placing their feet side by side so that the sight word is correctly spelled. Repeat this process until all of the sight words have been encoded correctly.

Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

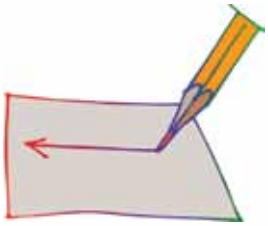
Reading Comprehension

Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Language and Skills Development

WRITING



Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Word Completion

Before the activity begins, prepare clozure cards for the sight words; omit letters and syllables. Provide each student with a clozure card. Call upon the students to complete their words on the clozure cards by writing in the missing parts. Afterward, review the students' responses.

What's Your Letter?

Provide each student with writing paper and a pen. Say a sight word. Each student should then write ONE letter from that word (any letter) on their paper. Review the students' responses to determine if all letters from the sight word were used. If all letters from the sight word were not used, ask the students to identify the letters that are "missing." Repeat with other sight words.

Dash

Group the students into two teams. Make two sets of dashes on the board — each set should be the same and should represent the number of letters in a sight word. When you say "Go," the first player in each team must rush to his/her set of dashes on the board. Each player must then write a sight word that fits the number of dashes. Accept any sight word that fits the dashes. The first player to do this correctly wins the round. Repeat with other sets of dashes until all students have had an opportunity to participate.

Mysterious Writing

Provide each student with writing paper and a pen. Stand in front of the students with a pad of paper and a pencil. Hold the pencil in such a way that the students can see the top of it but not the point. Write one of the sight words. The students should watch the top of the pencil carefully while you write the word. Each student should guess what word you wrote, and write it on his/her own paper. Repeat this process with other sight words and review the students' responses.

Language and Skills Development

Meshy Words

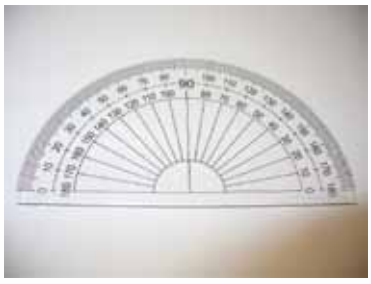
Write a "meshword" on the chalkboard. To create a meshword, combine two word halves from different words. For example, for "scale" and "data" you might write "scada." Provide each student with writing paper and a pen. The students should look at the meshword written on the chalkboard and attempt to identify the original words from which the halves were chosen. Each student should then write those two sight words on his/her sheet of paper. Repeat this process with other meshwords. This activity may be conducted in team form by writing a meshword on the chalkboard and having players from different teams attempt to identify the original words.

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

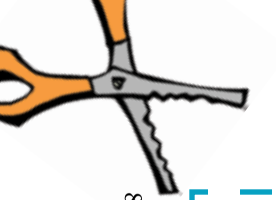
Listening: Mini Pictures

Have the students cut out the pictures. Say the key math words from this unit, and the students should hold up the pictures for them.



STUDENT SUPPORT MATERIALS

Sight Words



data

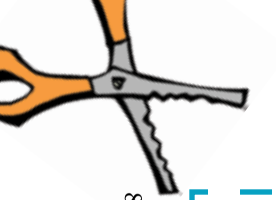
whole number

degree

similar

parentheses

scale



dimensions

protractor

time zone

STUDENT SUPPORT MATERIALS

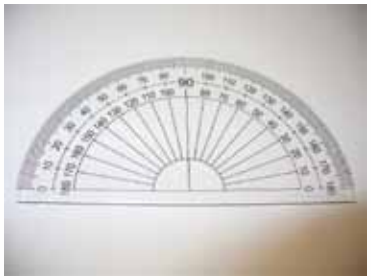
Reading • Sight Recognition

Sight Words Activity Page

Have the students circle the word for each picture.

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone



data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

Sight Words Activity Page

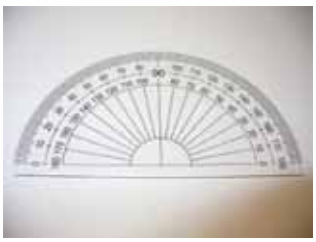
data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

Sight Words Activity Page

Write the numbers on their correct vocabulary graphics.



1. **data**
2. **whole number**
3. **degree**
4. **similar**
5. **parentheses**
6. **scale**
7. **dimensions**
8. **protractor**
9. **time zone**

Sight Words Activity Page

Write the key words from this unit horizontally in the boxes (more than one copy of each word can be written). Fill in all other boxes with any letters. Exchange page with another student. Find key words and circle.

Sight Words Activity Page

Highlight or circle the words in this word find.

whole number
degree
similar
time zone
dimensions
parentheses
scale
data
protractor

h t i e e d p a r e n t h e s e r e
i s r g e h i s e r s i e d a t a e
m d p r o t r a c t o n w n t t t e
o e n r e a i n i e a s n s r s a b
s n u e n s e t t i m e z o n e o e
o r l t e d o s a b d n o r d e t e
d e g r e g e e h e t i m e z n d e
d w t t o d i m e n s i o n s o p s
s i m i l a r d s l e o e d e m n o
h i m e a n z i o c d r n s c a l a
e e w h o l e n u m b e r o p e l a
m h e l e s o e i r s e a r a s t a
l w p e r s e c w h o l e n u m o e
t e p r o t r a c t o r t d s r e l
e t r p d m p a r e n t h e s e s i
t l e d e g r e e d i m e n s i n a
g a l t e d r s m e i g o a n e m m
p s c d m o s i m i i n o m e m n o
e r n i n i s c a l e h i a b t r a
o a a m e e s m e e n o h c s n m h

Sight Words Activity Page

ANSWER KEY

whole number
degree
similar
time zone
dimensions
parentheses
scale
data
protractor

h t i e e d p a r e n t h e s e r e
i s r g e h i s e r s i e d a t a e
m d p r o t r a c t o n w n t t t e
o e n r e a i n i e a s n s r s a b
s n u e n s e t t i m e z o n e o e
o r l t e d o s a b d n o r d e t e
d e g r e g e e h e t i m e z n d e
d w t t o d i m e n s i o n s o p s
s i m i l a r d s l e o e d e m n o
h i m e a n z i o c d r n s c a l a
e e w h o l e n u m b e r o p e l a
m h e l e s o e i r s e a r a s t a
l w p e r s e c w h o l e n u m o e
t e p r o t r a c t o r t d s r e l
e t r p d m p a r e n t h e s e s i
t l e d e g r e e d i m e n s i n a
g a l t e d r s m e i g o a n e m m
p s c d m o s i m i i n o m e m n o
e r n i n i s c a l e h i a b t r a
o a a m e e s m e e n o h c s n m h

STUDENT SUPPORT MATERIALS

Reading • Encoding

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

da_____

whole _____ber

deg_____

si_____lar

paren_____es

ree	**sc**	**num**
mi	**thes**	

Encoding Activity Page

_____ale

di_____sions

pro_____tor

time_____ne

ta	men
trac	zo

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

da	**theses**
whole n	**gree**
de	**tor**
simi	**ale**
paren	**sions**

Encoding Activity Page

sc	**ta**
dimen	**lar**
protrac	**one**
time z	**umber**

Encoding Activity Page

Cut out and encode the syllables of the words OR number the syllables in their correct sequence.

ren	ses	the	pa
_____	_____	_____	_____

men	sions	di
_____	_____	_____

trac	tor	pro
_____	_____	_____

Encoding Activity Page

lar	mi	si
_____	_____	_____

STUDENT SUPPORT MATERIALS

Reading Comprehension

What's the Answer?

Read the text and then select the correct answer for it. Fill in the bullet beside the answer of your choice.

1. Data show
   - ❍ ordered pairs of prime numbers.
   - ❍ the value of equivalent numbers.
   - ❍ collections of facts.
   - ❍ the commutative property.

2. A whole number has
   - ❍ no prime numbers.
   - ❍ no exponents.
   - ❍ no value.
   - ❍ no fractions.

3. These are used to measure angles:
   - ❍ ratios
   - ❍ estimates
   - ❍ degrees
   - ❍ composite numbers

4. When things are similar, they are
   - ❍ different in size.
   - ❍ different in shape.
   - ❍ different in the number of exponents they have.
   - ❍ average.

5. Another word for parentheses is
   - ❍ formula
   - ❍ bracket
   - ❍ ratio
   - ❍ numeral

6. Which of these words goes with *scale*?
   - ❍ ordered pair
   - ❍ variable
   - ❍ ratio
   - ❍ protractor

What's the Answer?

7 Which of these would be a dimension of an object?

- ❍ area
- ❍ width
- ❍ digit
- ❍ variable

8 A protractor measures

- ❍ the area of a surface.
- ❍ data.
- ❍ degrees in an angle.
- ❍ exponents.

9 How many time zones are there around the world?

- ❍ 12
- ❍ 365
- ❍ 24
- ❍ 180

What's the Answer?

ANSWER KEY

1. Data show
   - ❍ ordered pairs of prime numbers.
   - ❍ the value of equivalent numbers.
   - ● collections of facts.
   - ❍ the commutative property.

2. A whole number has
   - ❍ no prime numbers.
   - ❍ no exponents.
   - ❍ no value.
   - ● no fractions.

3. These are used to measure angles:
   - ❍ ratios
   - ❍ estimates
   - ● degrees
   - ❍ composite numbers

4. When things are similar, they are
   - ● different in size.
   - ❍ different in shape.
   - ❍ different in the number of exponents they have.
   - ❍ average.

5. Another word for parentheses is
   - ❍ formula
   - ● bracket
   - ❍ ratio
   - ❍ numeral

6. Which of these words goes with *scale*?
   - ❍ ordered pair
   - ❍ variable
   - ● ratio
   - ❍ protractor

What's the Answer?

7 Which of these would be a dimension of an object?

- ❍ area
- ● width
- ❍ digit
- ❍ variable

8 A protractor measures

- ❍ the area of a surface.
- ❍ data.
- ● degrees in an angle.
- ❍ exponents.

9 How many time zones are there around the world?

- ❍ 12
- ❍ 365
- ● 24
- ❍ 180

Reading Comprehension Activity Page

Write the numbers/letters for sentence halves that match.

1	Data show	A	degrees in a circle.
2	A whole number	B	ratio of the length in a drawing or object.
3	There are 360	C	a dimension.
4	Shapes are similar	D	facts, such as measurements or values.
5	Parentheses can be used to	E	time zones around the world.
6	Scale shows the	F	if their only difference is size.
7	Height would be an example of	G	has no fractions.
8	A protractor is used to	H	group things together.
9	There are 24	I	measure degrees in an angle.

1→_____ 2→ _____ 3→ _____ 4→ _____

5→ _____ 6→ _____ 7→ _____ 8→ _____

9→ _____

Reading Comprehension Activity Page

ANSWER KEY

1	Data show	A	degrees in a circle.
2	A whole number	B	ratio of the length in a drawing or object.
3	There are 360	C	a dimension.
4	Shapes are similar	D	facts, such as measurements or values.
5	Parentheses can be used to	E	time zones around the world.
6	Scale shows the	F	if their only difference is size.
7	Height would be an example of	G	has no fractions.
8	A protractor is used to	H	group things together.
9	There are 24	I	measure degrees in an angle.

1→ D 2→ G 3→ A 4→ F

5→ H 6→ B 7→ C 8→ I

9→ E

Reading Comprehension Activity Page

Cut out the words and glue them under their definitions.

This is when things are the same shape but different in size.	**This is the ratio of length in a drawing or model.**	**This is the unit of measurement for angles.**
This is an instrument used to measure degrees.	**These are collections of facts.**	**These can be used to group things together.**
These numbers have no fractions.	**Alaska is in one of these.**	**This is the measurement of length, in one direction.**

data **whole number** **degree** **similar**

parentheses **scale** **dimensions**

protractor **time zone**

Reading Comprehension Activity Page

ANSWER KEY

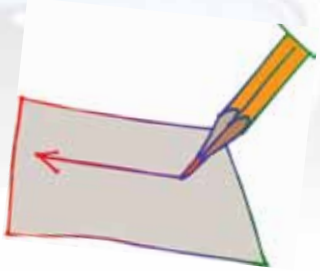
This is when things are the same shape but different in size. similar	**This is the ratio of length in a drawing or model.** scale	**This is the unit of measurement for angles.** degree
This is an instrument used to measure degrees. protractor	**These are collections of facts.** data	**These can be used to group things together.** parentheses
These numbers have no fractions. whole number	**Alaska is in one of these.** time zone	**This is the measurement of length, in one direction.** dimensions

STUDENT SUPPORT MATERIALS

Writing

Writing Activity Page

Have the students complete the writing of the key math words.



d_____t_____

_____ole n_____mbers

degr_____

si_____lar

paren_____ses

_____ale

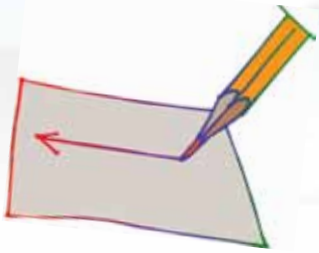
di _____sions

_____tractor

time _____ne

Writing Activity Page

Have the students complete the writing of the key math words.



d_____**a**

wh_____**r**

de_____**e**

si_____**r**

pa_____**s**

sc_____**e**

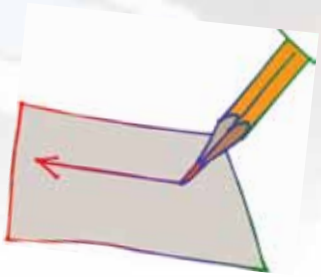
di_____**s**

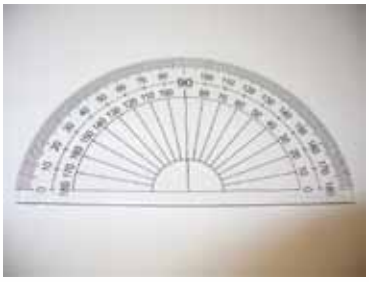
pr_____**r**

ti_____**e**

Basic Writing Activity Page

Have the students write the word for each picture.

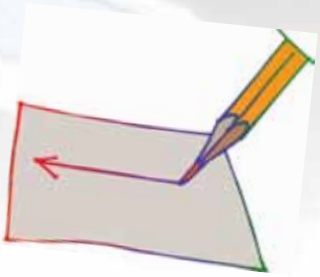


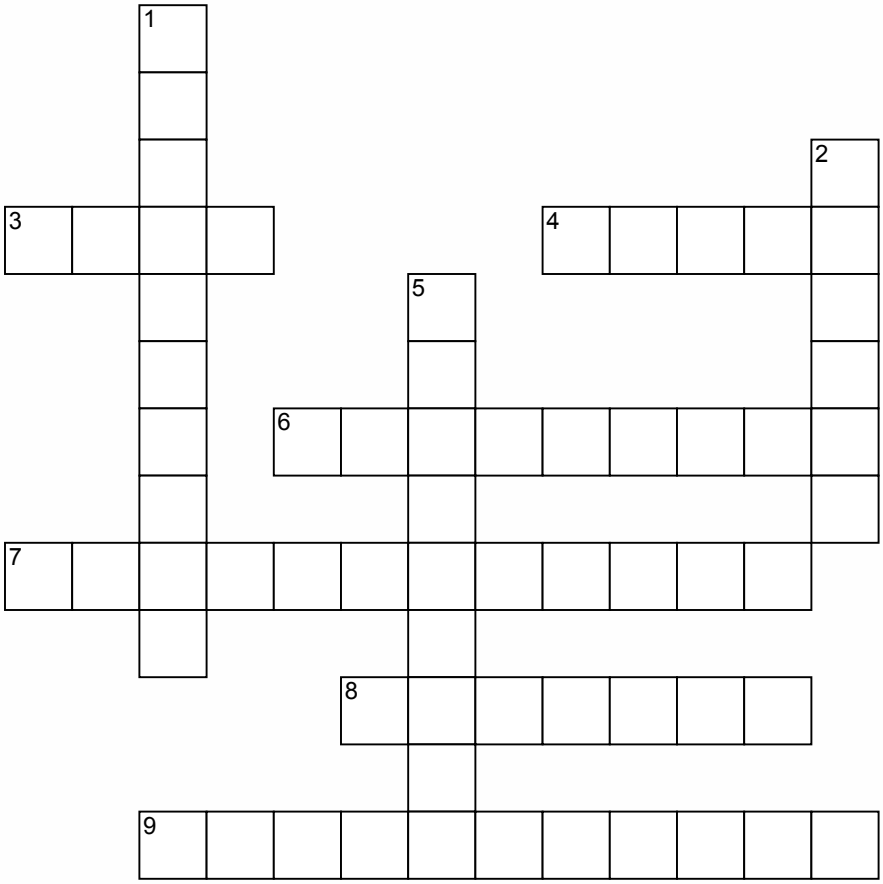


Basic Writing Activity Page

Have the students write the word for each picture.

Crossword Puzzle





www.CrosswordWeaver.com

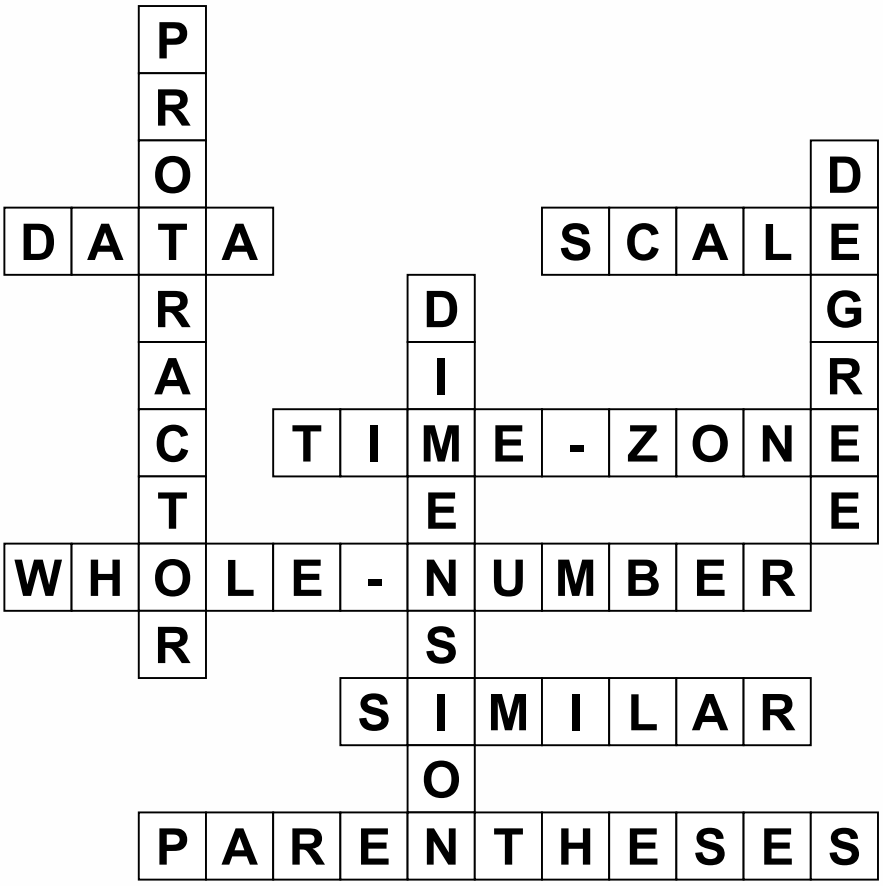
ACROSS

3 These are collections of facts.
4 This is the ratio of length in a drawing or model.
6 There are 24 of these.
7 These numbers have no fractions.
8 This is when things are the same shape but different in size.
9 These can be used to group things together.

DOWN

1 This is an instrument used to measure degrees.
2 This is the unit of measurement for angles.
5 This is the measurement of length, in one direction.

Crossword Puzzle Answers



UNIT ASSESSMENT

MEASUREMENT

Unit Assessment Teacher's Notes
Grade 7 • Unit 9
Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 by the picture for **DATA**.
2. Write the number 2 by the picture for **WHOLE NUMBERS**.
3. Write the number 3 by the picture for **DEGREE**.
4. Write the number 4 by the picture for **SIMILAR**.
5. Write the number 5 by the picture for **PARENTHESES**.
6. Write the number 6 by the picture for **SCALE**.
7. Write the number 7 by the picture for **DIMENSIONS**.
8. Write the number 8 by the picture for **PROTRACTOR**.
9. Write the number 9 by the picture for **TIME ZONE**.

SIGHT RECOGNITION

Turn to page 2 and 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 and 5 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 6 in your test. Write each word under its definition.
Refer to Student Support Materials for answer key.

BASIC WRITING

Turn to page 7 in your test. Look at the pictures in the boxes. Write the word for each picture.

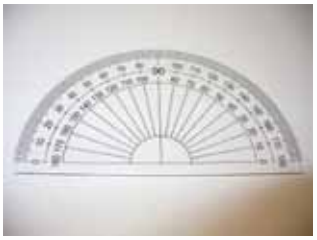
Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

Unit Assessment Student Pages
Grade 7 • Unit 9

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**



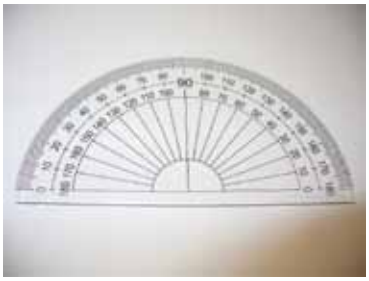

12

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone



data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

data
whole number
degree
similar
parentheses
scale
dimensions
protractor
time zone

paren

ta
ber
gree
lar
theses
ale
sions
tor
one

simi

ta
ber
gree
lar
theses
ale
sions
tor
one

sc

ta
ber
gree
lar
theses
ale
sions
tor
one

de

ta
ber
gree
lar
theses
ale
sions
tor
one

protrac

ta
ber
gree
lar
theses
ale
sions
tor
one

time z

ta
ber
gree
lar
theses
ale
sions
tor
one

dimen

ta
ber
gree
lar
theses
ale
sions
tor
one

whole num

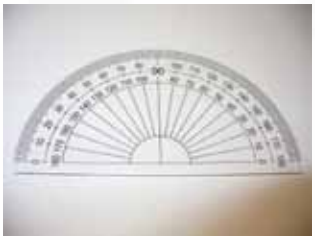
ta
ber
gree
lar
theses
ale
sions
tor
one

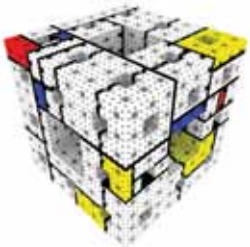
da

ta
ber
gree
lar
theses
ale
sions
tor
one

This is when things are the same shape but different in size.	This is the ratio of length in a drawing or model.	This is the unit of measurement for angles.
This is an instrument used to measure degrees.	These are collections of facts.	These can be used to group things together.
These numbers have no fractions.	Alaska is in one of these.	This is the measurement of length, in one direction.

data	scale	whole number	similar
degree	parentheses	dimensions	protractor
time zone			






12