4TH GRADE MATH SUMMER PACKET 2023

_____

(NAME)

Checkmate

To subtract with regrouping, follow these steps.

1. *Subtract the ones column. Regroup if needed.*

$$\begin{array}{r} 2\ 11 \\ 4\not{3}\not{1} \\ -\ 2\,6\,6 \\ \hline 5 \end{array}$$

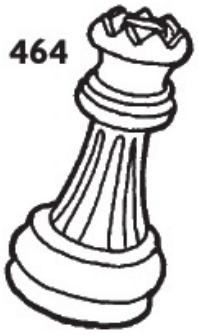
2. *Subtract the tens column. Regroup if needed.*

$$\begin{array}{r} 12 \\ 3\not{2}11 \\ \not{4}\not{3}\not{1} \\ -\ 2\,6\,6 \\ \hline 6\,5 \end{array}$$

3. *Subtract the hundreds column. Regroup if needed.*

$$\begin{array}{r} 12 \\ 3\not{2}11 \\ \not{4}\not{3}\not{1} \\ -\ 2\,6\,6 \\ \hline 1\,6\,5 \end{array}$$

Subtract. Cross out the chess piece with the matching difference. The last piece standing is the winner of the match.



$$\begin{array}{r} 956 \\ -\ 492 \\ \hline \end{array}$$

$$\begin{array}{r} 239 \\ -\ 176 \\ \hline \end{array}$$

$$\begin{array}{r} 842 \\ -\ 426 \\ \hline \end{array}$$

$$\begin{array}{r} 153 \\ -\ 80 \\ \hline \end{array}$$

$$\begin{array}{r} 351 \\ -\ 172 \\ \hline \end{array}$$

$$\begin{array}{r} 983 \\ -\ 284 \\ \hline \end{array}$$

$$\begin{array}{r} 526 \\ -\ 286 \\ \hline \end{array}$$

$$\begin{array}{r} 643 \\ -\ 479 \\ \hline \end{array}$$

$$\begin{array}{r} 258 \\ -\ 139 \\ \hline \end{array}$$

$$\begin{array}{r} 932 \\ -\ 426 \\ \hline \end{array}$$

$$\begin{array}{r} 852 \\ -\ 476 \\ \hline \end{array}$$

☐ **is left standing.**

Name_____ Date_____

Measure Mania

You may have heard of inches and yards, but you probably haven't heard of some of these wacky units! To find out more, convert each of the decimals to fractions. Then find that fraction in the list on the right. The correct unit of measure will be written next to the matching fraction. Write that unit of measure in the blank provided.

1. A small bunch of bananas is called what?

.25 _____

2. 45 gallons of fresh herring is a what?

.0007 _____

3. 560 yards of wool is called a what?

.47 _____

4. Buttons are measured in units called what?

2.75 _____

5. 500 pounds of cotton is called a what?

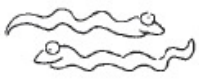
.059 _____

6. In England, a 40-inch stick of firewood is called what?

.07 _____

7. 6585.32 days are called what by astronomers?

1.2 _____



8. 250 eels are called what?

.04 _____

47/100 a hank

4/100 a bind

2 75/100 glitches

1 2/10 a saros

7/100 a billet

7/10000 a pool

25/100 a hand

59/1000 a bale

Name _____

More Fun Sports

Add or subtract.

91 − 67	48 + 43	92 − 45	70 − 17	63 − 47	38 + 54	29 + 36	80 − 42
skating	football	hockey	volleyball	basketball	soccer	tennis	track

Complete the puzzle with the sport that goes with each answer.

Across

3. 92

4. 16

5. 65

6. 91

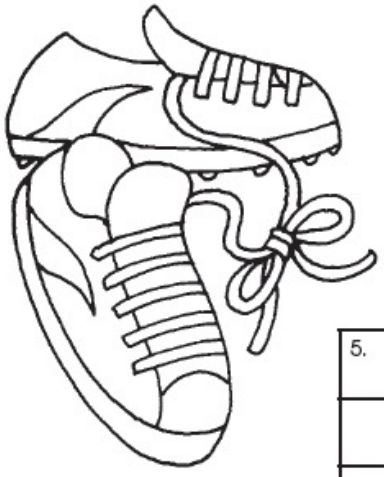
Down

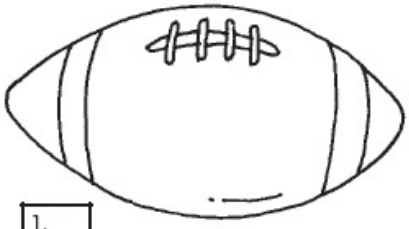
1. 47

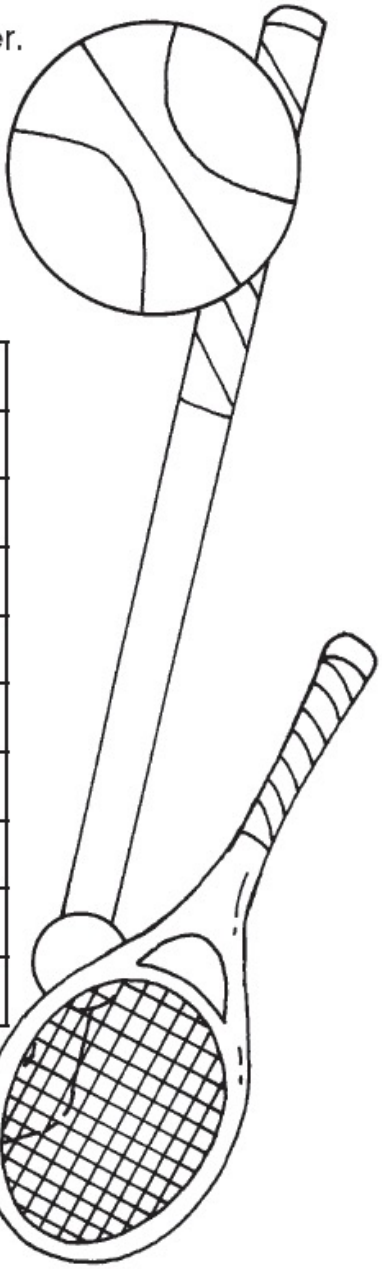
2. 53

3. 24

5. 38







Choose your favorite sport from above. On another piece of paper, write a problem with its same answer. Try to write a problem that includes regrouping.

It's Great to Associate!

The **associative property**: *Changing how the factors are grouped does not change the product.*

4 x
4 groups of

(2 x 3) = (4 x 2)

x 3
3 groups of

4 x (2 x 3)
4 groups of the array (2 x 3)

equals

(4 x 2) x 3
3 groups of the array (4 x 2)

Finish each multiplication sentence and draw an array to show the associative property. Write the product in the circle.

A.

2 x (5 x 3) = *(2 x 5) x 3*

B.

(2 x 6) x 5

C.

(4 x 6) x 2 =

D.

3 x (2 x 8) =

E.

3 x (7 x 2) =

F.

8 x (1 x 5) =

G.

(4 x 3) x 2 =

H.

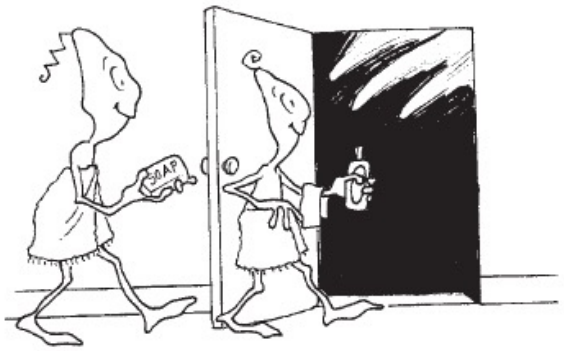
(9 x 2) x 3 =

Name: _____ Date: _____

Riddle

Where do aliens wash?

Write the missing numerator.
Solve the riddle using your answers below.



$\frac{1}{2} = \frac{\quad}{4}$ M	$\frac{2}{6} = \frac{\quad}{9}$ O
$\frac{2}{3} = \frac{\quad}{9}$ S	$\frac{1}{2} = \frac{\quad}{8}$ E
$\frac{3}{4} = \frac{\quad}{12}$ A	$\frac{1}{3} = \frac{\quad}{15}$ I
$\frac{1}{2} = \frac{\quad}{22}$ H	$\frac{1}{2} = \frac{\quad}{16}$ T
$\frac{3}{10} = \frac{\quad}{100}$ R	$\frac{2}{3} = \frac{\quad}{18}$ N
$\frac{1}{2} = \frac{\quad}{14}$ G	$\frac{1}{2} = \frac{\quad}{20}$ W

Solve the Riddle! Write the letter that goes with each answer.

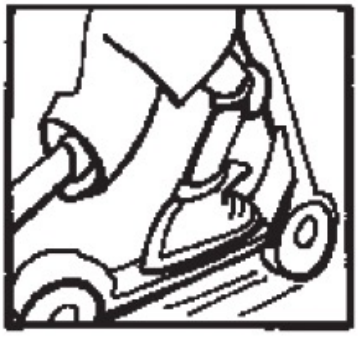
____	____	____	____	____	____	____	____
5	12	2	4	8	4	3	30

____	____	____	____	____	____	____
6	11	3	10	4	30	6

Safety First

Multiply. Then use the code to answer the question below.

O. 142 x 21	E. 425 x 13	V. 123 x 28	W. 324 x 42
Y. 425 x 12	R. 123 x 19	C. 214 x 26	A. 314 x 13
I. 234 x 27	L. 134 x 52	P. 121 x 64	! 389 x 15
G. 248 x 51	T. 181 x 16	S. 341 x 14	

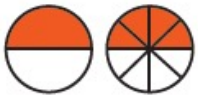


What should you remember when having fun on wheels?

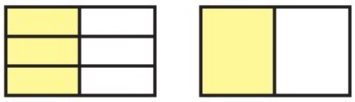
4,082	6,968	13,608	4,082	5,100	4,774		13,608	5,525	4,082	2,337
7,744	2,337	2,892	2,982	5,525	5,564	2,896	6,318	3,444	5,525	
12,648	5,525	4,082	2,337	5,835						

It's All the Same!

Equivalent fractions *have the same amount.*



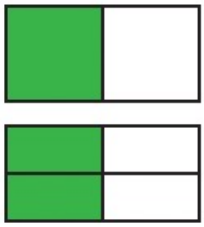
$\frac{1}{2} = \frac{4}{8}$



$\frac{3}{6} = \frac{1}{2}$

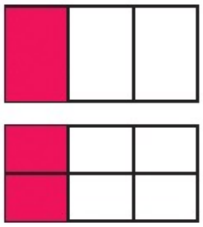
Write each missing numerator to show equivalent fractions.

A.



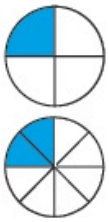
$\frac{1}{2} = \frac{\quad}{4}$

B.



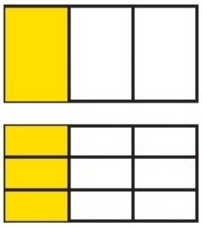
$\frac{1}{3} = \frac{\quad}{6}$

C.



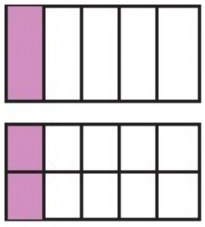
$\frac{1}{4} = \frac{\quad}{8}$

D.



$\frac{1}{3} = \frac{\quad}{9}$

E.

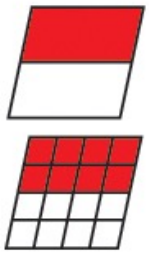


$\frac{1}{5} = \frac{\quad}{10}$

F.

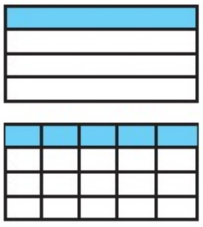
$\frac{1}{2} = \frac{\quad}{8}$

G.



$\frac{1}{2} = \frac{\quad}{16}$

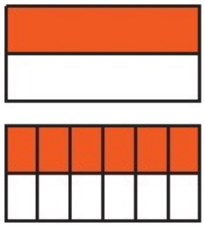
H.



$\frac{1}{4} = \frac{\quad}{20}$

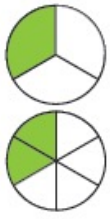
Write the number sentence that shows each set of equivalent fractions.

I.



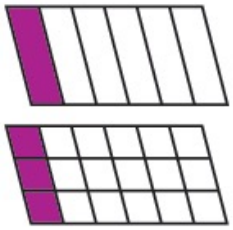
$\_\_ = \_\_$

J.



$\_\_ = \_\_$

K.



$\_\_ = \_\_$

L.

$\_\_ = \_\_$

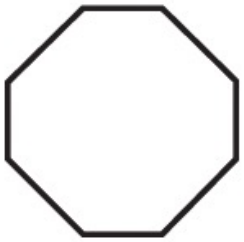
Raymond's pizza has been cut into fourths. Debbie's pizza has been cut into eighths. Raymond eats 2/4 of his pizza. Debbie eats 4/8 of her pizza. Did they eat the same amount of pizza? On another sheet of paper, draw a picture to show your answer.

Name _____

Skill: Naming Polygons

Write the name of each shape and the number of sides.

1.



shape _____

sides _____

2.

shape _____

sides _____

3.

shape _____

sides _____

4.

shape _____

sides _____

5.

shape _____

sides _____

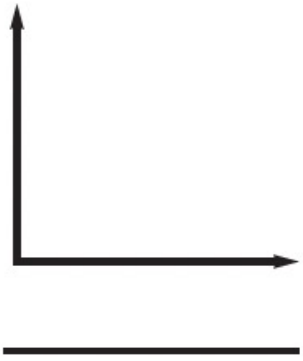
6.

shape _____

sides _____

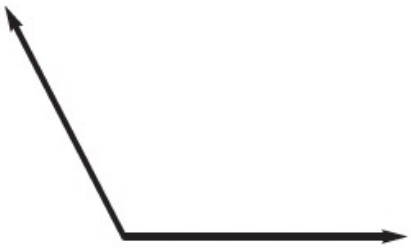
Write the name of the type of angle shown.

7.



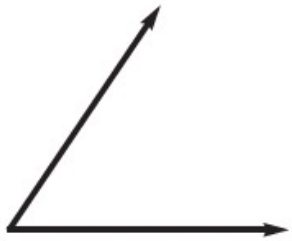
_____

8.



_____

9.



_____

Add It Up!

Using what you already know about addition with regrouping, solve the following problems. You may use such strategies as mental math, place value, and regrouping more than once, as needed.

1. 932 + 168

2. 848 + 254

3. 672 + 288

4. 222 + 688

5. 4,358 + 257

6. 99 + 387

7. 6,782 + 19,803

8. 98,388 + 65,973

9. 529 + 1,140 + 3,349

10. 3,009 + 1,225 + 17,791

11. 1,234 + 5,678 + 91,011

12. 4,562 + 30,829 + 16,049

Name_____ **Date** _____

Fractions Are a Breeze

Sail into fractions by renaming each fraction below in lowest terms.
If the fraction is equal to 1/2 or 3/4, shade the box blue.
If the fraction is equal to 1/4, shade the box yellow.
If the fraction is equal to 1/3, shade the box green.
If the boxes are colored correctly, a picture will appear.

$\frac{3}{6}$	$\frac{2}{8}$	$\frac{21}{42}$	$\frac{75}{150}$	$\frac{31}{62}$	$\frac{11}{22}$	$\frac{7}{14}$
$\frac{50}{100}$	$\frac{9}{36}$	$\frac{11}{44}$	$\frac{32}{64}$	$\frac{30}{60}$	$\frac{6}{12}$	$\frac{60}{120}$
$\frac{4}{8}$	$\frac{7}{28}$	$\frac{16}{64}$	$\frac{3}{12}$	$\frac{8}{16}$	$\frac{40}{80}$	$\frac{12}{16}$
$\frac{9}{18}$	$\frac{25}{100}$	$\frac{6}{24}$	$\frac{8}{32}$	$\frac{19}{76}$	$\frac{48}{64}$	$\frac{5}{10}$
$\frac{10}{20}$	$\frac{17}{68}$	$\frac{12}{48}$	$\frac{13}{52}$	$\frac{20}{80}$	$\frac{25}{100}$	$\frac{14}{28}$
$\frac{35}{70}$	$\frac{8}{32}$	$\frac{10}{40}$	$\frac{15}{60}$	$\frac{40}{160}$	$\frac{14}{56}$	$\frac{5}{20}$
$\frac{21}{28}$	$\frac{12}{24}$	$\frac{40}{80}$	$\frac{15}{30}$	$\frac{33}{66}$	$\frac{15}{20}$	$\frac{75}{100}$
$\frac{5}{10}$ $\frac{2}{6}$	$\frac{12}{36}$	$\frac{9}{27}$	$\frac{30}{90}$	$\frac{20}{60}$	$\frac{11}{33}$	$\frac{6}{18}$ $\frac{2}{4}$
$\frac{18}{24}$	$\frac{9}{12}$ $\frac{5}{15}$	$\frac{15}{45}$	$\frac{8}{24}$	$\frac{10}{30}$	$\frac{3}{9}$ $\frac{6}{8}$	$\frac{30}{40}$

Bon Voyage!

The Math Early Bird

If you change the grouping of the addends, the sum will remain the same. This is called the **associative property**.

(4 + 2) + 1 = 4 + (2 + 1)

Solve each problem. Then use the code to answer the riddle below.

(3 + 5) + 8 = ☐ + (5 + 8)

9 + (3 + 8) = (☐ + 3) + 8

6 + (4 + 3) = (6 + ☐) + 3

(10 + 2) + 4 = 10 + (☐ + 4)

(10 + 3) + 2 = 10 + (☐ + 2)

7 + (2 + 8) = (☐ + 2) + 8

(9 + 8) + 2 = ☐ + (8 + 2)

7 + (8 + 4) = (☐ + 8) + 4

(9 + 3) + 2 = ☐ + (3 + 2)

7 + (7 + 3) = (7 + 7) + ☐

(8 + 2) + 9 = 8 + (☐ + 9)

5 + (2 + 4) = (5 + 2) + ☐

7 + (6 + 6) = (☐ + 6) + 6

8 + (8 + 4) = (☐ + 8) + 4

6 + (4 + 3) = (☐ + 4) + 3

9 + (9 + 8) = (☐ + 9) + 8

(☐ + 8) + 5 = 7 + (8 + 5)

7 + (2 + 6) = (☐ + 2) + 6

(☐ + 8) + 3 = (9 + 8) + 3

8 + (☐ + 2) = (8 + 9) + 2

What game do birds play?

____	____	____	____	_	____	_	____	____	____
2	3	3	7		4		6	9	9

Use three dice. Roll two of the dice. Write as an addition problem in parentheses. Roll the other die. Add to the sum in the parentheses. Now switch the parentheses. Add. Does it still add up to the same sum?

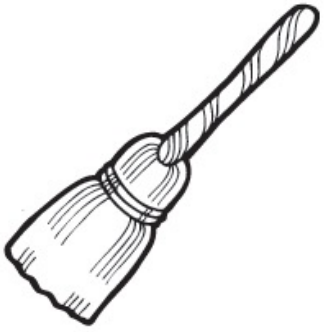
Name _____ Skill: Number Sequencing

Fill in the blanks to complete the number sequences.

1.	150	200	_____ **O**	300	_____ **T**	400	450	500	_____ **G**
2.	12	18	24	_____ **E**	36	42	_____ **I**	54	_____ **N**
3.	120	_____ **R**	116	114	_____ **W**	110	108	_____ **A**	104
4.	4	8	12	_____ **P**	20	_____ **S**	28	_____ **D**	36
5.	45	60	75	_____ **L**	105	120	_____ **U**	150	_____ **H**

Use the letters underneath the numbers you have filled in to find the answer to the following riddle.

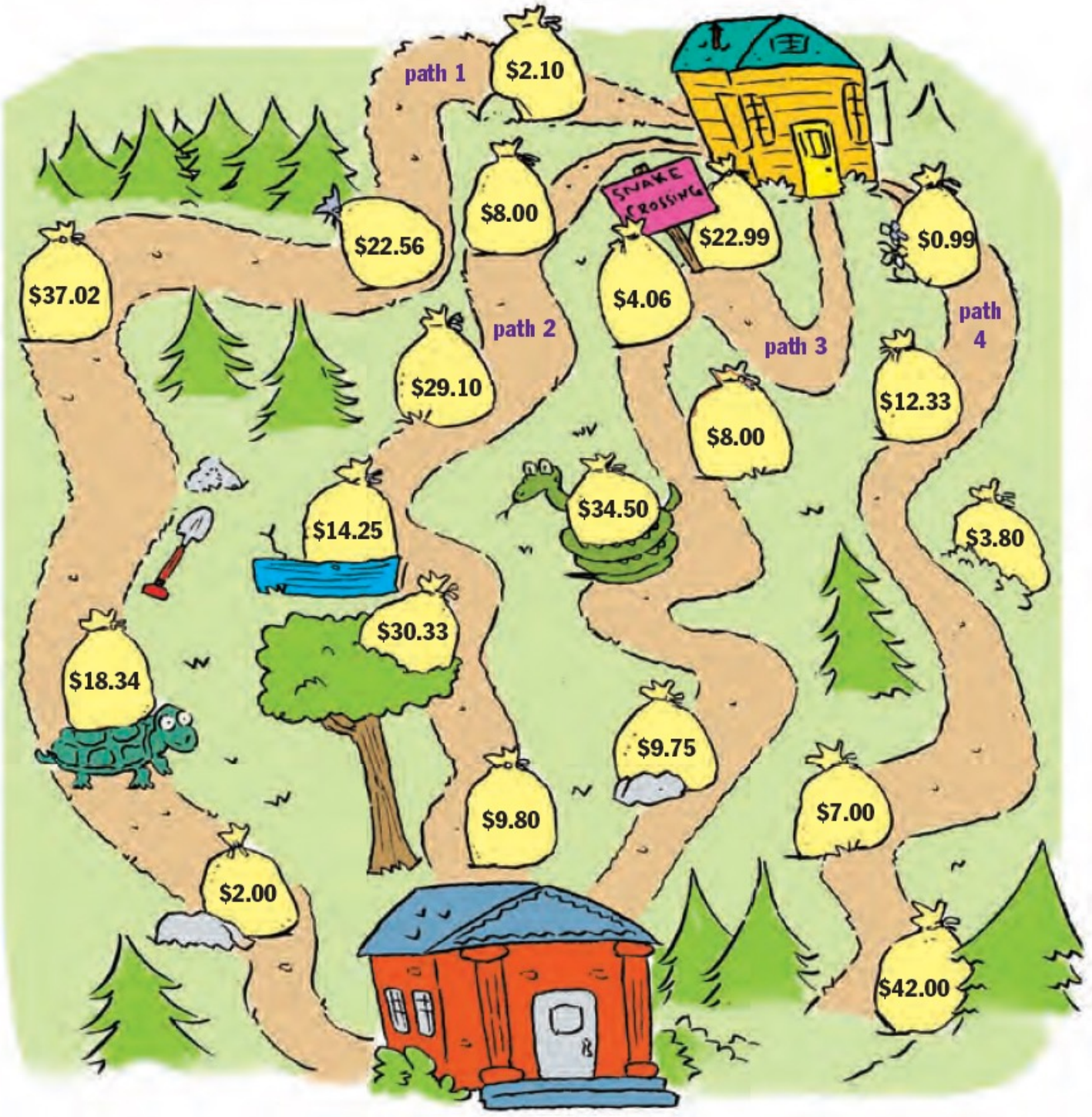
What did the vacuum cleaner say to the broom?



_____ **48**		_____ **112**	_____ **48**	_____ **24**	_____ **165**														
_____ **16**	_____ **30**	_____ **250**	_____ **16**	_____ **90**	_____ **30**														
_____ **112**	_____ **250**	_____ **135**	_____ **90**	_____ **32**		_____ **24**	_____ **350**	_____ **250**	_____ **16**										
_____ **16**	_____ **135**	_____ **24**	_____ **165**	_____ **48**	_____ **60**	_____ **550**		_____ **135**	_____ **24**										
_____ **106**	_____ **118**	_____ **250**	_____ **135**	_____ **60**	_____ **32**														

Greedy Gretchen

Gold! Gold! Gold! Help Greedy Gretchen find the path through Nottingham Forest from her house to the bank. On which path can she collect the most gold? Draw a line to show that path. On another sheet of paper, explain your answer.



Name _____

Date _____

Any Old Place Won't Do

Draw a line from a place value in the left column to a number in the right column that has a digit with that place value.

Hint

The place value of a digit in a number is determined by where it is in the number.

1. four tens	**a.** 11,708
2. eight ten thousands	**b.** 748,910
3. nine hundreds	**c.** 30,246
4. five ones	**d.** 14,861
5. eight hundred thousands	**e.** 426,379
6. six tens	**f.** 81,392
7. seven thousands	**g.** 917,573
8. zero ten thousands	**h.** 2,685
9. seven hundreds	**i.** 908,839
10. four hundred thousands	**j.** 869,554

Bonus! What is the largest number in the right column? _____

PLACE VALUE

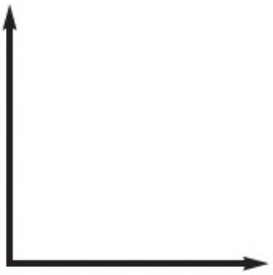
Here are the place values for the number 659,432.

hundred thousands	ten thousands	thousands	hundreds	tens	ones
6	5	9	4	3	2

Name _____ Skill: Measuring and Drawing Angles

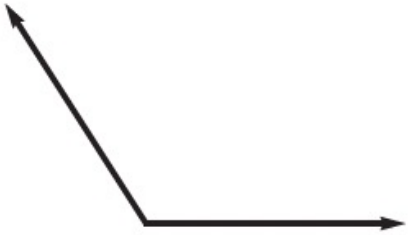
Use a protractor to find the measurement of each of the following angles.

1.



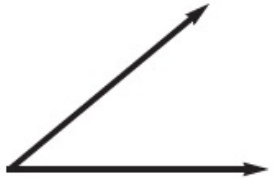
measurement =_____

2.



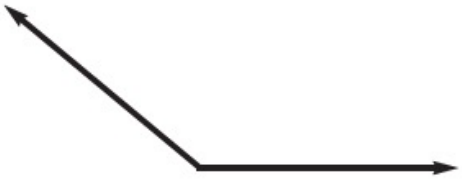
measurement =_____

3.



measurement =_____

4.



measurement =_____

Use a protractor to draw an angle equal to the measurement given.

1. 33 degrees

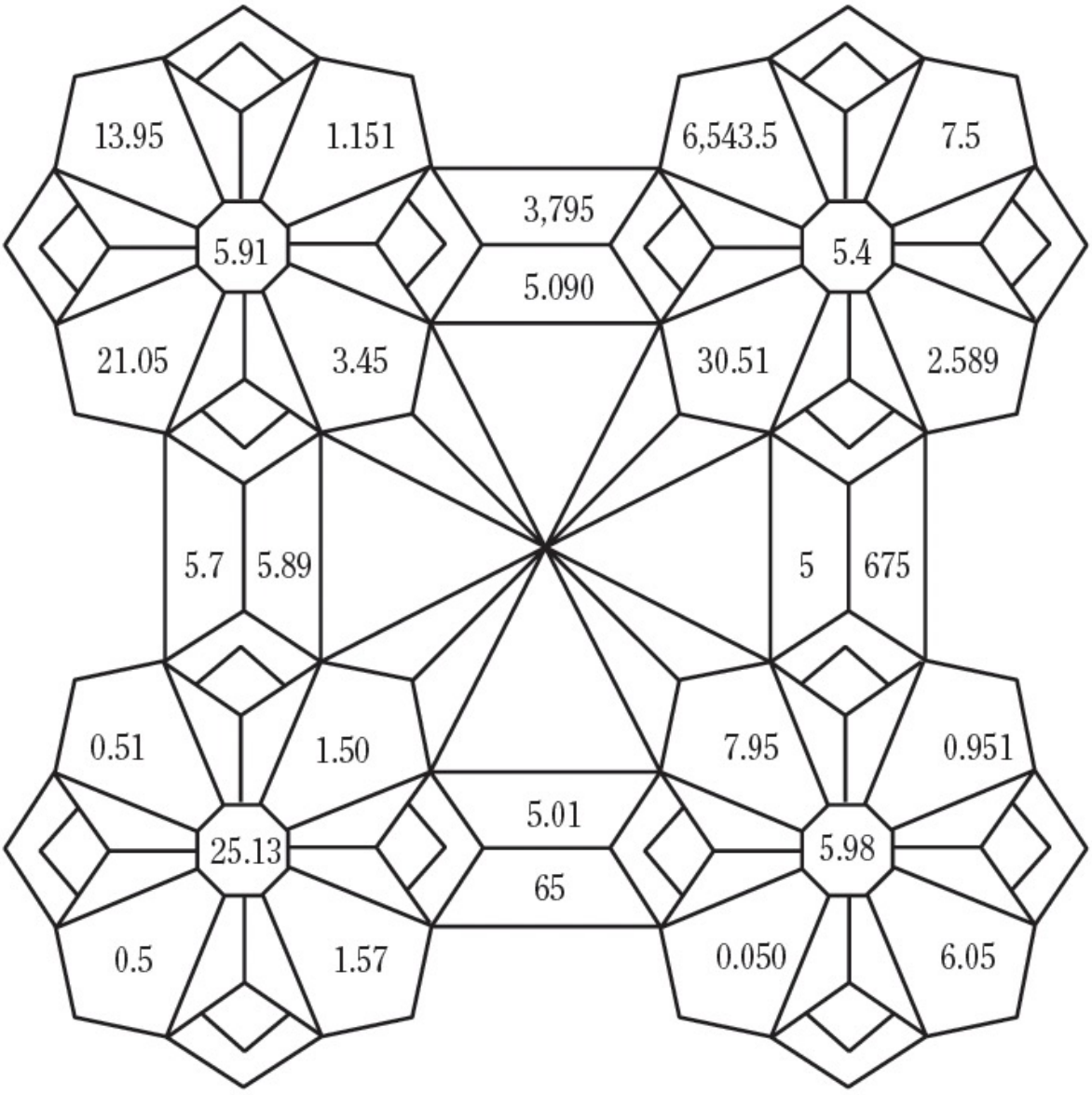
2. 49 degrees

3. 25 degrees

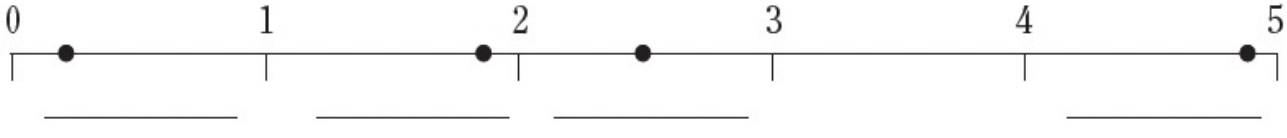
4. 72 degrees

Kaleidoscope of Flowers

If the number has a 5 in the ones place, color the shape green.
If the number has a 5 in the tenths place, color the shape pink.
If the number has a 5 in the hundredths place, color the shape yellow.
Finish the design by coloring the other shapes with colors of your choice.

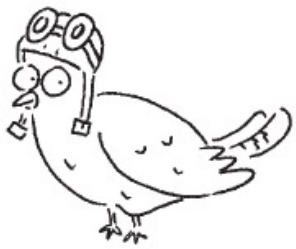


Taking It Further: Place the following decimals in the correct places on the lines below the dots: 4.9, 1.7, 2.5, and 0.2.

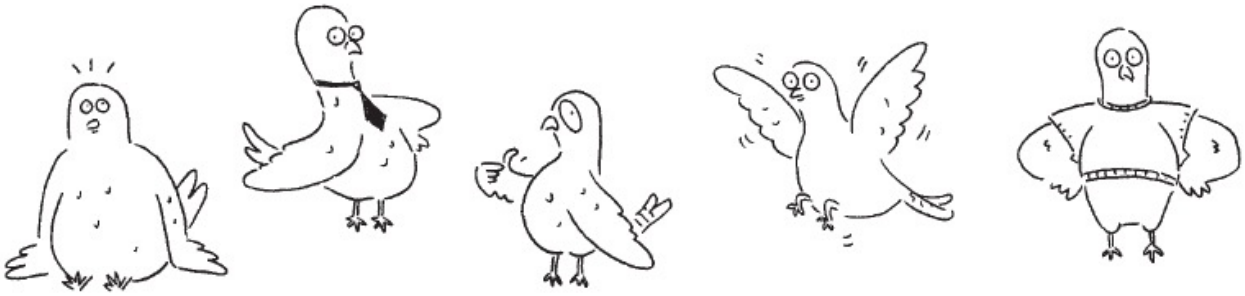


Name_____ Date_____

Fly the Coop



These birds have flown the coop! Luckily, they didn't get too far before they returned home. How many yards, feet, or inches did the homing pigeons put on their wings? Answer the questions below to find out.



How far is that in . . .

1.	Flyer flew 150 yards.	feet _____	inches _____
2.	Feathers McGee flew 2,100 inches.	feet _____	yards _____
3.	Claws flew 36 feet.	inches _____	yards _____
4.	Ruthie the Rambler flew 57 yards.	feet _____	inches _____
5.	Beatrice Birdbrain flew 126,720 inches.	feet _____	yards _____
6.	Wendy Wings flew 80 yards.	feet _____	inches _____
7.	Lucy Landingpad flew 243 feet.	yards _____	inches _____
8.	Coop Cooper flew 1,800 inches.	feet _____	yards _____

Challenge:

Perry Pigeon flew 2 miles. **feet** _____ **inches** _____