



GRADE 4




**KEEP
CALM
AND
GET READY FOR
5TH GRADE!!!**
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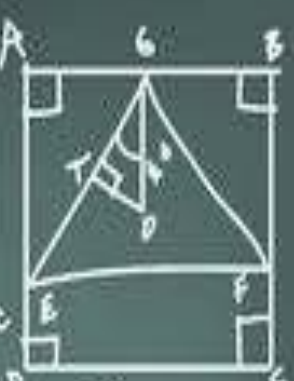
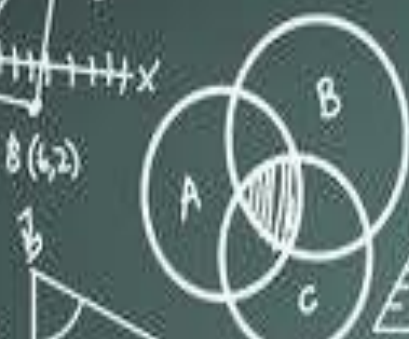


$$g(x) = \sqrt{x(x-a)(x-b)}$$

10

$$\frac{AD}{AB} = \frac{DE}{BC}$$

$$1+1=2$$



$$\left(\frac{4+4}{4^3}\right) \left(\frac{4(4^2+4+4)4^4}{4-3^0}\right) xy = ab^2$$



$$x+y = a^2b$$

$$xy = ab^2$$

$$\Delta ABC \sim \Delta ADC$$

$$x = \sqrt{\frac{b^2}{c}} + c - \frac{b}{2}$$

Math

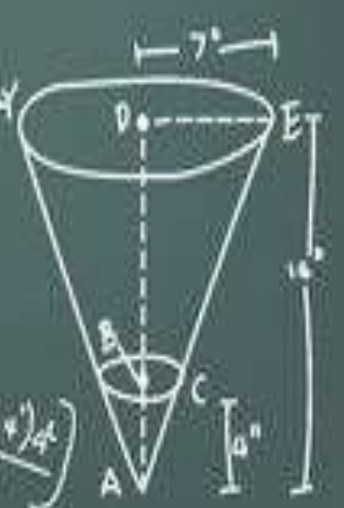
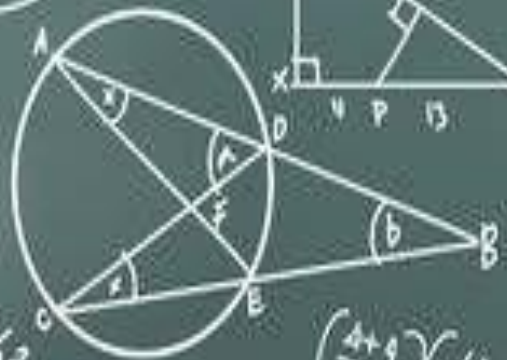
$$(x+y)^2 - (x-y)^2$$

- 4x1=4
- 4x2=8
- 4x3=12
- 4x4=16
- 4x5=20
- 4x6=24



$$x = -1$$

$$= (-1)^5 + (-1)^4 + (-1)^3 + (-1)^2 + (-1) + (-1)^0 + (-1)^{-1}$$



$$(x^2+2xy+y^2) - (x^2-2xy+y^2)$$

$$x^2+2xy+y^2 - x^2+2xy-y^2$$

$$\left(\frac{4+4}{4^3}\right) \left(\frac{4(4^2+4+4)4^4}{4-3^0}\right)$$



Place Value Scramble



Name: _____

Date: _____

Using the numbers in the number bank, create different six-digit numbers based on each of the place value clues below.

Number Bank

6 3 5 9 4 1

1. What is the smallest six-digit number you can make?

____ _ , ____ _

2. What is the largest six-digit number you can make?

____ _ , ____ _

3. What is the smallest six-digit number you can make that has 4 in the tens place?

____ _ , ____ _

4. What is the largest six-digit number you can make that has 1 in the thousands place?

____ _ , ____ _

5. What is the smallest six-digit number you can make that is divisible by five?

____ _ , ____ _

6. What is the largest six-digit number you can make that ends in an even number?

____ _ , ____ _

7. Use the number you wrote in problem 6 to answer the following questions.

a. Circle the digit in the ten thousands place.

b. Write the number in expanded form.



Place Value & Expanded Form



Name: _____

Date: _____



Fill in the missing numbers in the box.
Then write out the place values on the line provided.

1. $610 = \boxed{600} + \boxed{10} =$

Six hundreds, one ten.

2. $346 = \boxed{} + 40 + \boxed{} =$

3. $967 = \boxed{} + \boxed{} + 7 =$

4. $5485 = 5000 + \boxed{} + \boxed{} + \boxed{} =$

5. $2094 = \boxed{} + 0 + 90 + \boxed{} =$



Place Value & Expanded Form



Name: _____

Date: _____



Fill in the missing numbers in the box.
Then write out the place values on the line provided.

6. $3912 = \square + 900 + \square + \square =$

7. $10,495 = 10,000 + \square + 90 + \square =$

8. $92,401 = \square + \square + \square + 1 =$

9. $668,935 = \square + \square + \square + \square + 30 + 5 =$

10. $304,598 = \square + \square + 500 + \square + 8$



Place Value Number Challenge



Name: _____

Date: _____

Directions: Using the numbers in the number bank, create a six-digit number based on the clues given.

4	9	2	6	1	5
---	---	---	---	---	---

1. What is the smallest six-digit number you can make?

2. What is the largest six-digit number you can make?

3. What is the smallest six-digit number you can make that has 6 in the ones place?

4. What is the largest six-digit number you can make that has 2 in the thousands place?

5. What is the smallest six-digit number you can make that ends in an even number ?



Beachy Word Problems



Name: _____

Date: _____

Solve the word problems. Be sure to show your work.

1. Peter and Prunella were collecting seashells on the beach. They found 193 sand dollars, 284 mussel shells, and 367 oyster shells. When they got home, they discovered that 54 sand dollars, 106 mussel shells, and 139 oyster shells were broken. How many of the shells were unbroken?



2. Prunella gathered 5 baskets of shells. Each basket contained 50 shells. She gave 48 shells to Peter, 19 shells to her mother, and 72 shells to her cousin, Petunia. How many shells did Prunella have left?



3. Last week, Peter found 241 sand dollars, 106 sea snail shells, and 82 mini conch shells. This week, he found 165 sand dollars, 319 sea snail shells, and 24 mini conch shells. During which week did Peter find more shells? How many more?



4. On Saturday morning, Peter and Prunella arrived at the annual beach clean up event at 9:00. They spent 53 minutes picking up trash and 27 minutes raking sand. If the event ends at 10:30, how many minutes do they have left to make signs that read "keep our beach clean"?



Check Your Work: To Three-Digit Subtraction



Name: _____

Date: _____



Solve each subtraction problem below. Then add the differences to check your work.

1.

$$\begin{array}{r} 24 \\ - 5 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 5 \\ \hline 24 \end{array}$$

2.

$$\begin{array}{r} 95 \\ - 88 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 88 \\ \hline 95 \end{array}$$

3.

$$\begin{array}{r} 513 \\ - 423 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 423 \\ \hline 513 \end{array}$$

4.

$$\begin{array}{r} 81 \\ - 73 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 73 \\ \hline 81 \end{array}$$

5.

$$\begin{array}{r} 91 \\ - 34 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 34 \\ \hline 91 \end{array}$$

6.

$$\begin{array}{r} 74 \\ - 66 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 66 \\ \hline 74 \end{array}$$

7.

$$\begin{array}{r} 968 \\ - 920 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 920 \\ \hline 968 \end{array}$$

8.

$$\begin{array}{r} 94 \\ - 77 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 77 \\ \hline 94 \end{array}$$

9.

$$\begin{array}{r} 93 \\ - 56 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 56 \\ \hline 93 \end{array}$$

10.

$$\begin{array}{r} 107 \\ - 82 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 82 \\ \hline 107 \end{array}$$

11.

$$\begin{array}{r} 711 \\ - 618 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 618 \\ \hline 711 \end{array}$$

12.

$$\begin{array}{r} 71 \\ - 49 \\ \hline \square \end{array} \quad \begin{array}{r} \square \\ + 49 \\ \hline 71 \end{array}$$

Which Numbers are Prime?

Name: _____

Date: _____

Circle the prime numbers and add them together. Remember: A Prime Number is a number that is divisible only by one and itself.

17 21 13 7 1
 5 9 11 14 18 2 17 3

TOTAL ____
 Is the total a prime number? _____

Solve the equations and circle the answers that are prime.

1 $14 + 5$	2 6×7	3 $30 + 2$
4 $37 - 28$	5 $54 + 9$	6 $8 + 19$
7 12×4	8 $11 + 56$	9 $25 - 8$
10 $49 + 7$	11 19×3	12 $102 - 5$
10 $15 + 23$	11 $60 - 17$	12 $128 + 4$



Multiply Two and Three-Digit Factors



Name: _____

Date: _____

$$\begin{array}{r} 324 \\ \times 17 \\ \hline 5508 \end{array}$$

Illustration: 18 yellow school buses arranged in a 3x6 grid, representing the product 324 multiplied by 17.

Multiply, regroup if needed.

$$\begin{array}{r} 324 \\ \times 17 \\ \hline 2268 \\ + 3240 \\ \hline 5508 \end{array}$$

A $\begin{array}{r} 118 \\ \times 24 \\ \hline \end{array}$	$\begin{array}{r} 97 \\ \times 45 \\ \hline \end{array}$	$\begin{array}{r} 32 \\ \times 61 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ \times 50 \\ \hline \end{array}$
B $\begin{array}{r} 519 \\ \times 23 \\ \hline \end{array}$	$\begin{array}{r} 678 \\ \times 12 \\ \hline \end{array}$	$\begin{array}{r} 403 \\ \times 39 \\ \hline \end{array}$	$\begin{array}{r} 981 \\ \times 42 \\ \hline \end{array}$
C $\begin{array}{r} 704 \\ \times 32 \\ \hline \end{array}$	$\begin{array}{r} 592 \\ \times 244 \\ \hline \end{array}$	$\begin{array}{r} 863 \\ \times 305 \\ \hline \end{array}$	$\begin{array}{r} 199 \\ \times 671 \\ \hline \end{array}$



The Super Powers of Ten



Name: _____

Date: _____

Powers of ten are numbers that are divisible by 10.
Review the examples below, then solve the problems.



To multiply a whole number by a power of ten, count the number of zeros after the 1 and add the same number or zeros (or place values) to the end of the whole number you are multiplying.

$$\begin{aligned}52 \times 10 &= 520 \\37 \times 100 &= 3,700 \\4 \times 1,000 &= 4,000\end{aligned}$$

$$\begin{aligned}0.52 \times 10 &= 5.2 \\0.37 \times 100 &= 37 \\0.048 \times 1,000 &= 48\end{aligned}$$

To multiply a decimal by a power of ten, move the decimal point one place to the RIGHT for each zero after the 1.

Multiply by the power of ten.

1) $0.45 \times 10 =$ _____

2) $81 \times 1,000 =$ _____

3) $0.216 \times 100 =$ _____

4) $1.07 \times 100 =$ _____

5) $973 \times 10 =$ _____

6) $0.75 \times 10,000 =$ _____

7) $63 \times 1,000 =$ _____

8) $0.059 \times 10 =$ _____

9) $1,048 \times 100 =$ _____

$$\begin{aligned}1.6 \div 10 &= 0.16 \\520 \div 10 &= 52 \\37 \div 100 &= 0.37 \\48 \div 1,000 &= 0.048\end{aligned}$$

To divide a number by a power of ten, move the decimal point LEFT as many places as there are zeros in power of ten. If there are not enough digits in the number you are dividing, you may add zeros.



Divide by the power of ten.

10) $1.27 \div 10 =$ _____

11) $3,948 \div 100 =$ _____

12) $56 \div 1,000 =$ _____

13) $8 \div 10 =$ _____

14) $470.1 \div 100 =$ _____

15) $2.35 \div 1,000 =$ _____



Multiplication and the Associative Property



Name: _____

Date: _____

One of the multiplication properties is associative, which means you can group the factors in a multiplication equation differently and still get the same product.

$$\mathbf{A \times (B \times C) = (A \times B) \times C}$$

Find the missing factor according to the associative property.

1. $5 \times (4 \times 3) = (5 \times 4) \times \boxed{}$

2. $7 \times (3 \times 6) = (7 \times 3) \times \boxed{}$

3. $(30 \times 5) \times 12 = (30 \times 12) \times \boxed{}$

Find the product of these numbers

4. $6 \times (3 \times 4) = \boxed{} \quad (6 \times 3) \times 4 = \boxed{}$

5. $10 \times (2 \times 5) = 10 \times \boxed{} = \boxed{}$

6. $(10 \times 2) \times 5 = \boxed{} \times 2 = \boxed{}$

Think About It:

7. When you group the factors differently do you get a different product? Explain.

8. How could you change two out of three factors in an equation and still have the same product?

Multiplication and the Distributive Property



Name: _____

Date: _____

One of the multiplication properties is distributive, which means you can multiply a sum or difference by multiplying each number separately and then adding or subtracting the products.

$$A \times (B + C) = A \times B + A \times C$$

$$A \times (B - C) = A \times B - A \times C$$

Find the product.

1. $5 \times (4 + 3) = 5 \times (\underline{\quad}) = \boxed{\quad}$

2. $(7 \times 3) + (7 \times 6) = (\underline{\quad}) + (\underline{\quad}) = \boxed{\quad}$

3. $3 \times (15 - 12) = 3 \times (\underline{\quad}) = \boxed{\quad}$

4. $(3 \times 15) - (3 \times 12) = (\underline{\quad}) - (\underline{\quad}) = \boxed{\quad}$

Rewrite the equations. An example has been provided for you

5. $6 \times (7 + 1) = (6 \times 7) + (6 \times 1)$
 $= (42) + (6)$
 $= 48$

6. $9 \times (5 + 3) = \boxed{\quad}$
 $= \boxed{\quad}$
 $= \boxed{\quad}$

7. $10 \times (10 - 3) = \boxed{\quad}$
 $= \boxed{\quad}$
 $= \boxed{\quad}$

Think About It:

How could you change two out of three factors in an equation and still have the same product?



Multiplication and the Commutative Property



Name: _____

Date: _____

One of the multiplication properties is commutative, which means that you can multiply numbers in any order and get the same product.

$$A \times B = B \times A$$

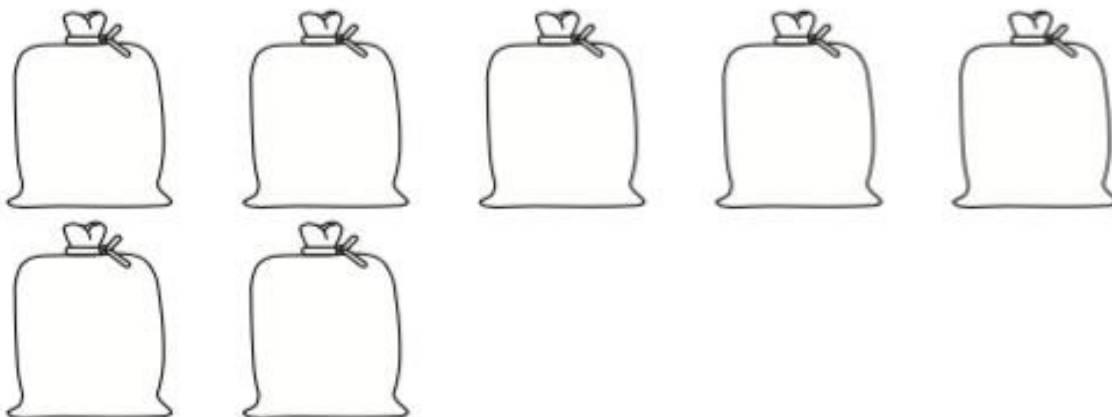
Find the missing number in the equations following the commutative property rule. Then answer the questions below.

1. $5 \times 4 = 4 \times \square$ 2. $7 \times 3 = 3 \times \square$

3. Jenny has five sacks of baby socks. Each bag contains eight socks. Draw the items in each bag. How many socks does Jenny have?



4. Raoul has seven sacks of baby mittens. Each sack contains four mittens. Draw the items in each bag. How many mittens does Raoul have?



5. Write the multiplication equations for each Jenny and Raoul's baby clothes using the commutative property.

____ x ____ = ____ x ____
____ x ____ = ____ x ____



More Multiplying by Seven



Name: _____

Date: _____

Find the product.

$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$

Fill in the multiplication chart.

x	1	2	3	4	5	6	7	8	9	10
7										



More Multiplication Comparisons



Name: _____

Date: _____

Directions: Test your multiplication skills by writing in the correct symbol: $>$, $<$ or $=$.

1. 13×0 <input type="text"/> 2×1	2. 12×5 <input type="text"/> 10×6	3. 5×5 <input type="text"/> 6×4
4. 12×3 <input type="text"/> 6×6	5. 4×3 <input type="text"/> 5×2	6. 6×5 <input type="text"/> 7×3
7. 6×9 <input type="text"/> 7×8	8. 12×4 <input type="text"/> 9×5	9. 8×3 <input type="text"/> 6×4
10. 8×4 <input type="text"/> 6×6	11. 5×4 <input type="text"/> 9×2	12. 13×0 <input type="text"/> 2×1
13. 9×5 <input type="text"/> 7×8	14. 3×3 <input type="text"/> 4×2	15. 11×6 <input type="text"/> 7×9
16. 6×3 <input type="text"/> 4×4	17. 5×2 <input type="text"/> 7×1	18. 7×7 <input type="text"/> 6×8
19. 10×5 <input type="text"/> 7×6	20. 7×4 <input type="text"/> 14×2	21. 9×4 <input type="text"/> 5×8

More Fun Finding the Quotient



Name: _____

Date: _____

Division

is the process of finding how many times one number will fit into another number. Division is the opposite, or inverse, operation of multiplication.

$$12 \div 2 = 6$$

dividend divisor quotient

$$\begin{array}{r} \text{quotient} \\ 6 \\ 2 \overline{)12} \\ \text{dividend} \end{array}$$

The number you are dividing is the **dividend**.

The number you are dividing by is the **divisor**.

The answer to a division problem is the **quotient**.

$$16 \div 2 = 8$$

$$2 \overline{)16} \begin{array}{c} 8 \\ \rightarrow \end{array}$$

Hint: Use your multiplication facts to help you find the answer.

$$2 \times ? = 16$$

The answer is **8**.

1. $14 \div 7 =$ $7 \overline{)14}$

2. $15 \div 5 =$ $5 \overline{)15}$

3. $12 \div 3 =$ $3 \overline{)12}$

4. $18 \div 9 =$ $9 \overline{)18}$

5. $10 \div 2 =$ $2 \overline{)10}$

6. $21 \div 3 =$ $3 \overline{)21}$



Division Riddle



Name: _____

Date: _____

Solve each division problem. Then use the remainders for each problem to solve the riddle.

Hint: You will not use all the letters to solve the riddle.

What goes up and doesn't go back down?



Example:

$$\begin{array}{r}
 170 \text{ r}2 \\
 3 \overline{) 512} \\
 \underline{- 3} \\
 21 \\
 \underline{- 21} \\
 02
 \end{array}$$

<p>G</p> $7 \overline{) 410}$	<p>B</p> $8 \overline{) 839}$	<p>R</p> $3 \overline{) 1551}$
<p>O</p> $5 \overline{) 671}$	<p>Y</p> $6 \overline{) 3299}$	<p>U</p> $9 \overline{) 258}$
<p>N</p> $9 \overline{) 341}$	<p>E</p> $8 \overline{) 594}$	<p>A</p> $4 \overline{) 1239}$

What goes up and doesn't go back down?

5

1

6

0

3

4

2



Sugar Coated Fractions



Name: _____

Date: _____



Fractions are everywhere, even in candy! Write a fraction that shows the ratio of colored candy for each problem, then simplify the fraction. Be sure to show your work.

Gumdrops



12 red gumdrops



15 blue gumdrops



24 yellow gumdrops

Example: $\frac{\text{red gumdrops}}{\text{total number gumdrops}} = \frac{12}{36} + \frac{12}{12} = \frac{1}{3}$

Divide by a common factor to simplify

Sour Chews



7 green sour chews



8 purple sour chews



18 pink sour chews



16 orange sour chews

Lollipops



13 yellow lollipops



21 red lollipops



10 green lollipops



26 purple lollipops

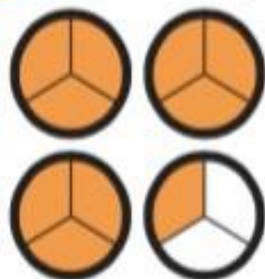
Activity: With your own favorite colorful candy, find the fractions of each color in the bag.

Feed The Kramsters! Review

Kramsters are very picky eaters. Feed each kramster the correct number of pellets by converting the following improper fractions to mixed numbers. Color in the pellets to match each mixed number.

EXAMPLE:

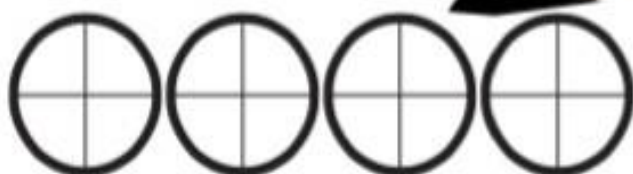
$$\frac{10}{3}$$



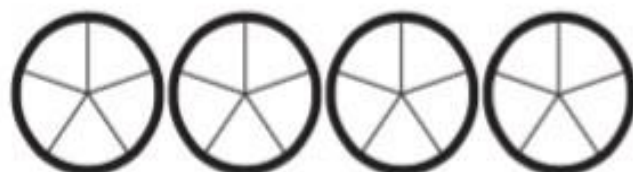
$$\rightarrow 3\frac{1}{3}$$



$$\frac{15}{4}$$



$$\frac{12}{5}$$



$$\frac{7}{2}$$



$$\frac{6}{3}$$



For the last one, shade in the pellets using your own outlines.

$$\frac{9}{4}$$





Calculating Area at the Zoo



Name: _____

Date: _____

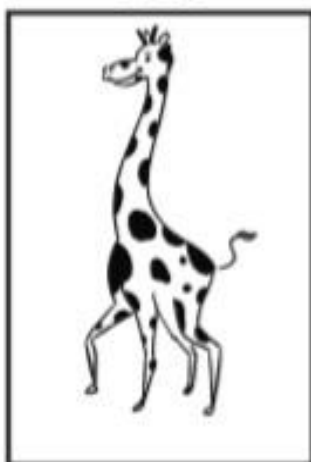
Find the area of each animal enclosure at the zoo. **Remember:** Area = Length x Width

53 ft.



38 ft.

24 ft.



19 ft.

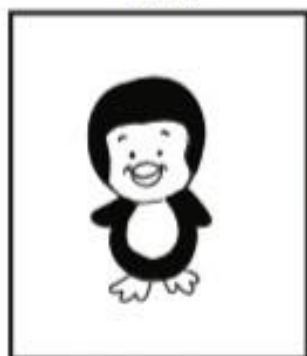


19 ft.

97 ft.

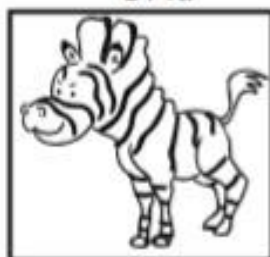


16 ft.



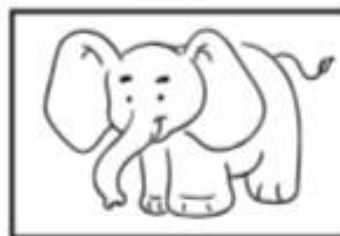
59 ft.

31 ft.



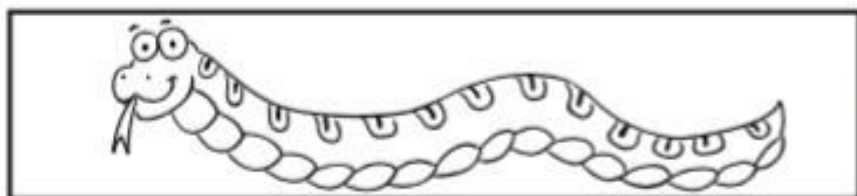
31 ft.

72 ft.



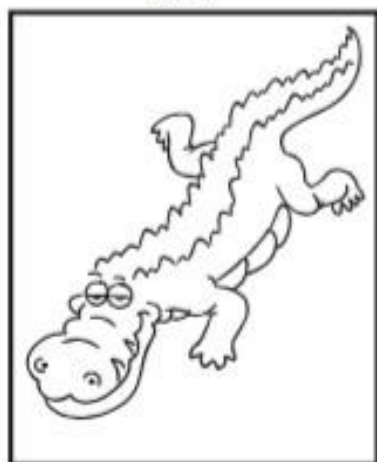
47 ft.

84 ft.



12 ft.

25 ft.



65 ft.



29 ft.



26 ft.

Geometry Basics: More Perimeters

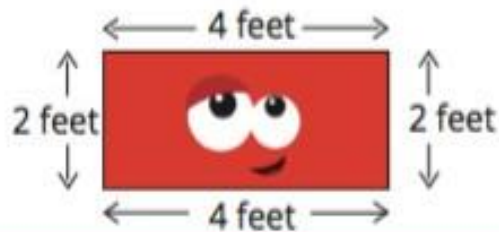


Name: _____

Date: _____

Geometry: Perimeter

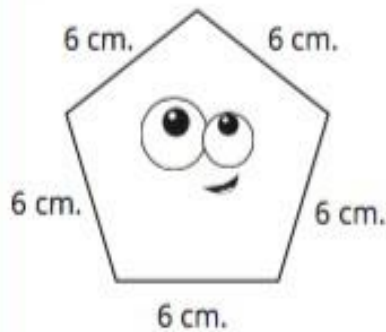
The perimeter of a polygon is equal to the distance around it.



$$\begin{array}{r}
 2 \text{ feet} \\
 4 \text{ feet} \\
 2 \text{ feet} \\
 + 4 \text{ feet} \\
 \hline
 12 \text{ feet}
 \end{array}$$

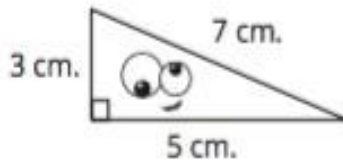
Directions: Calculate the perimeter for the following polygons.

1.



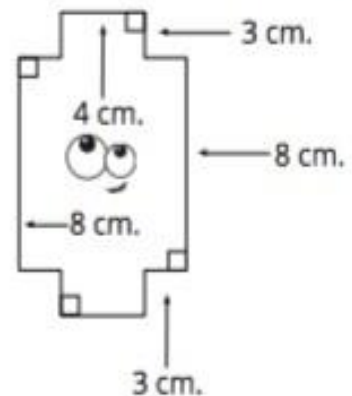
perimeter = ____ cm.

2.



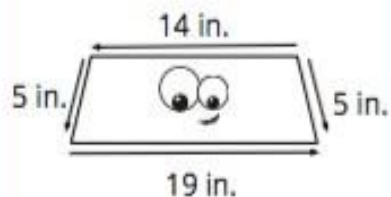
perimeter = ____ cm.

3.



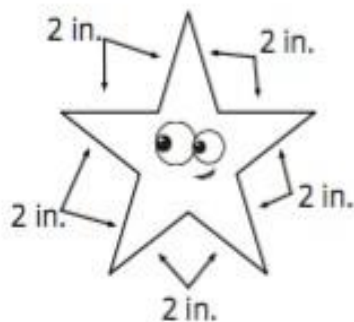
perimeter = ____ cm.

4.



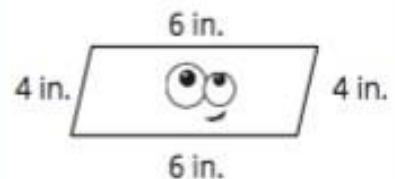
perimeter = ____ in.

5.



perimeter = ____ in.

6.



perimeter = ____ in.