

TORO'S MATH DRILLS

ConocoPhillips

INSTANT REPLAY

ACTIVITY WORKSHEETS

TORO's Math Drills presented by ConocoPhillips was developed in collaboration with our education partner, United Way of Greater Houston.



TORO'S MATH DRILLS

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TORO's Math Drills is an educational video series designed to challenge 3rd and 4th grade students. Covering subjects like fractions, multiplication, division, place value and money, TORO's Math Drills will help your students tackle math through fun and exciting football examples.

OUTLINE

VOCABULARY/CONCEPT RECAP

TEXANS/FOOTBALL EXAMPLE

OTHER/CLASSROOM EXAMPLE

Questions? Please email TOROsMathDrills@HoustonTexans.com

PLACE VALUE

What is Place Value?

_____

_____

_____

If the Houston Texans quarterback throws the football for 4,823 passing yards during the football season, what is the place value of each digit?

4: _____

8: _____

2: _____

3: _____

Now let's break it down 4,823 in expanded notation.

Great job! Can you think of another number and determine the place value of each digit?

☐ _____ ☐ _____

☐ _____ ☐ _____

FRACTIONS

What is a Fraction?

_____

_____

_____

The top number of a fraction that tells us how many parts of whole is called the _____ . The bottom number of a fraction that tells us how many items make up the whole is called the _____ .

It's gameday! The Houston Texans players are getting ready for the game. There's been a mix up! 2 players are wearing their Deep Steel Blue jerseys and 3 players are wearing their Battle Red jerseys. What is the fraction for the players wearing the Battle Red jersey?

☐

—

☐

Great job! Now look around your classroom and see what other items you can find that has many parts of a whole. What do you see?

_____

_____

_____

MONEY

What is Money?

_____

_____

You're going to a Houston Texans game! You have $20.00. What can you buy from the concession stand?

CONCESSION STAND $$ CHART	
Soft Drink	$5.00
Bottled Water	$2.00
Popcorn	$5.25
Hot Dogs	$5.75

YOUR ORDER

Cost	Item
$_____	_____
$_____	_____
$_____	_____
$_____	_____

Total $_____

Did you get any change back? _____

If yes, how much? _____

Great job! Now think about what other items you could buy with $20.00. Write your wish list below.

_____

_____

3-DIGIT MULTIPLICATION AND DIVISION

What is multiplication? _____

What sign do you use for multiplication? _____

What is division? _____

What sign do you use for division? _____

The Houston Texans football game lasts for 4 quarters – 1st quarter, 2nd quarter, 3rd quarter and 4th quarter. The Houston Texans Cheerleaders did 3 cheers every quarter. How many cheers did the Houston Texans cheerleaders do for the whole game?

_____ X _____ = _____ cheers

If during one game the cheerleaders did 16 cheers in total? How many cheers did they do each quarter?

_____ ÷ _____ = _____ cheers

Great job! Now, think about how many minutes you spend watching TV or playing on your tablet every day? How many times does that make every week?

_____ X _____ days = _____

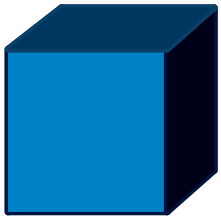
2D & 3D SHAPES

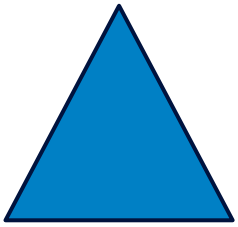
What does the D stand for in 2D and 3D? _____

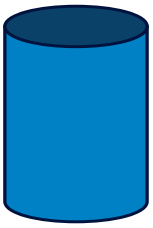
Things that are flat are _____

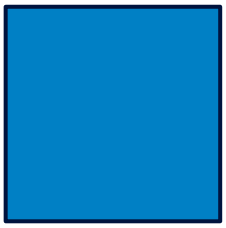
Things you see in real life are _____

Name these 2D and 3D shapes?





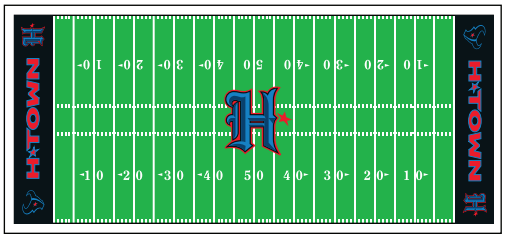




_____ _____ _____ _____



Is a football a 2D or 3D shape? (circle one)



Is the Houston Texans field a 2D or 3D shape? (circle one)

Great job! Now, look around your classroom. What other 2D or 3D shapes do you see?

_____ **Is it 2D or 3D? (circle one)**

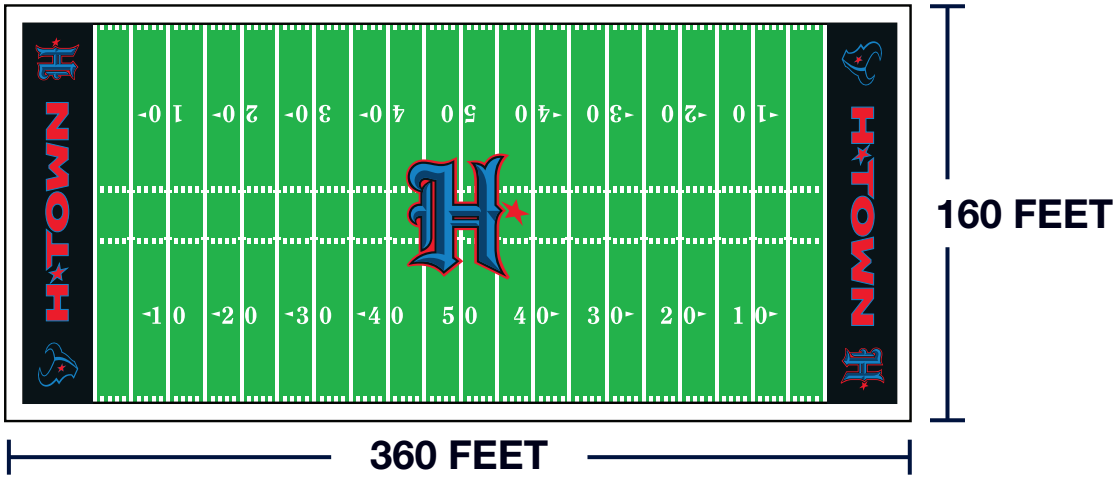
_____ **Is it 2D or 3D? (circle one)**

_____ **Is it 2D or 3D? (circle one)**

PERIMETER & AREA

The distance around a flat shape is? _____

The size of the surface is? _____



The total size of the Houston Texans football field is 360 feet in length and 160 feet in width. How do you calculate the perimeter of the field?

_____ + _____ + _____ + _____ = _____ feet

How do you calculate the area of the field?

_____ x _____ = 57,600 square feet

***Hint: The formula for area is length x width.**

Great job! Now can you calculate perimeter of your notebook, desk or table? I'm calculating the perimeter of my: _____

_____ + _____ + _____ + _____ = _____ feet

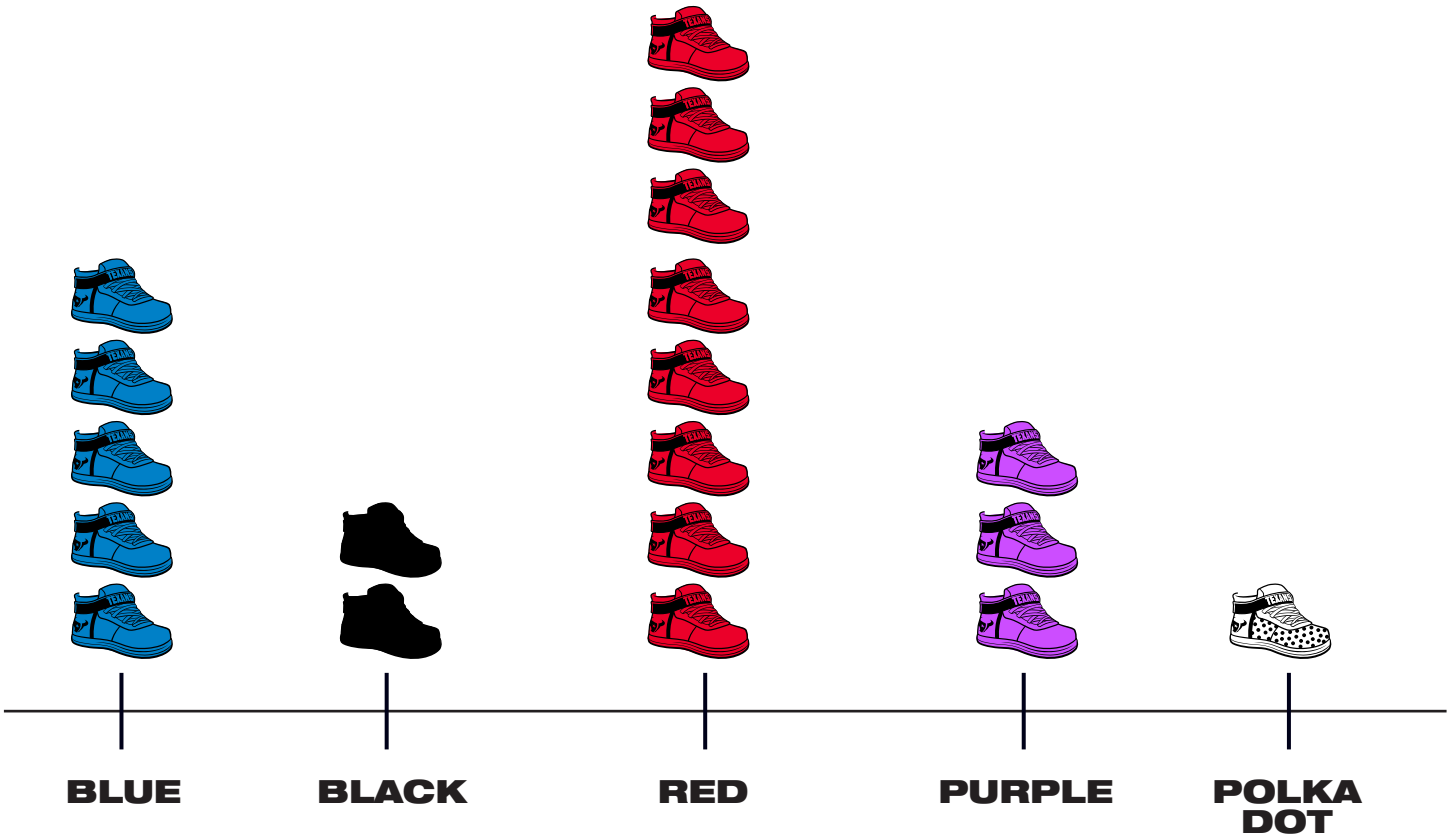
DATA ANALYSIS

Help TORO match each word with the correct definition! Draw a line from the vocabulary word to the correct definition.

Data	●	●	**Making sense of information**
Dot Plot	●	●	**Information such as how many pairs of sneakers**
Data Analysis	●	●	**Graphical display of data using dots**

Use the Dot Plot that shows TORO's different types of sneakers to answer the questions below.

TORO'S SNEAKERS



How many total sneakers does TORO have? _____

How many more red sneakers does TORO have than purple? _____

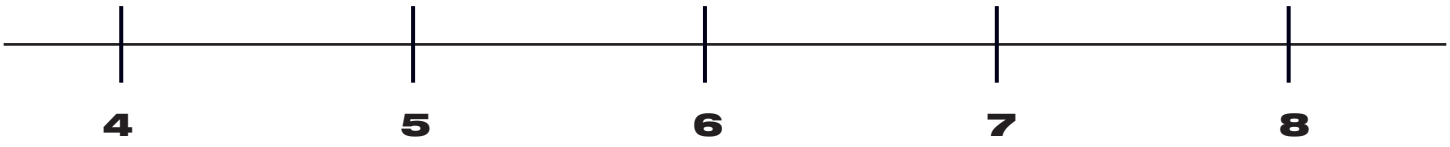
DATA ANALYSIS

Nice! TORO needs another favor. He asked ten fans to participate in the TORO Passing Challenge. He passed the football to each fan and recorded the number of times they caught the ball. Below are the results.

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

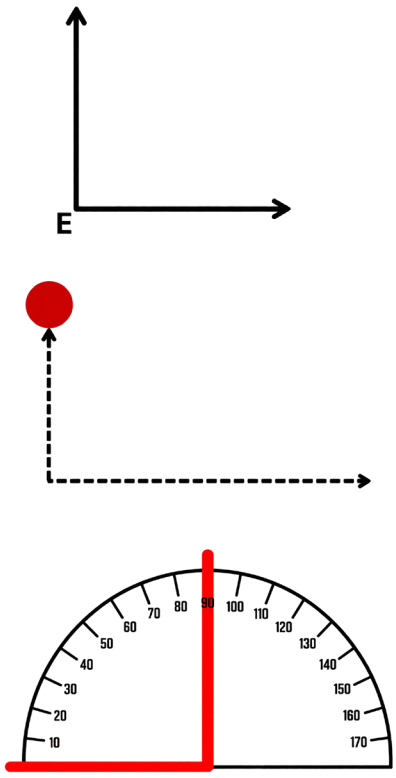
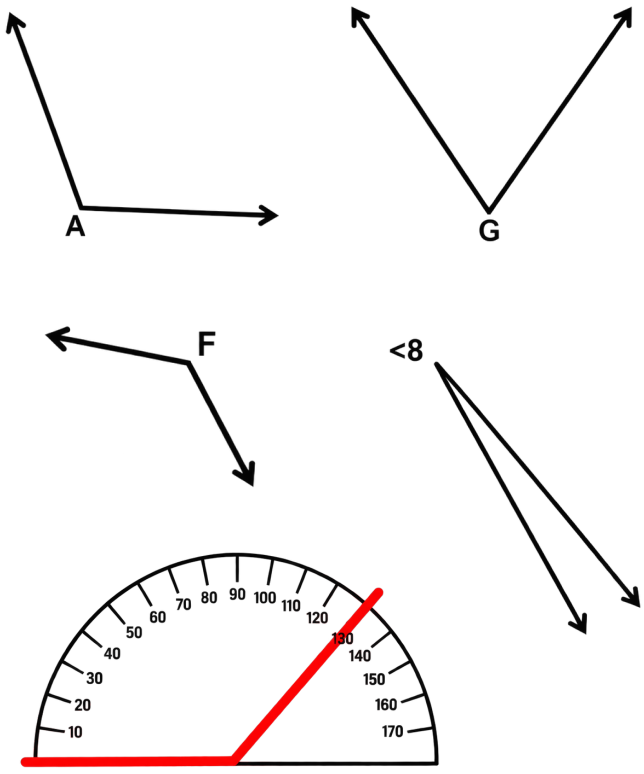
Help him by using the data he collected to complete the Dot Plot below.

TORO'S PASSING CHALLENGE



ANGLES

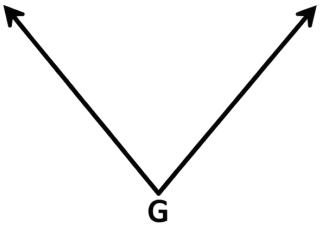
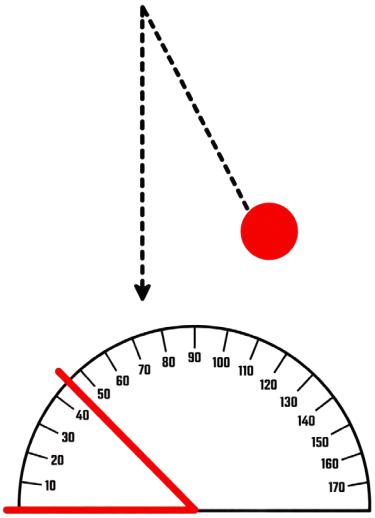
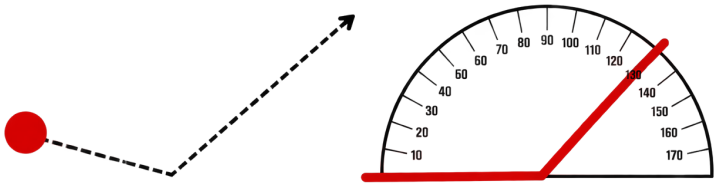
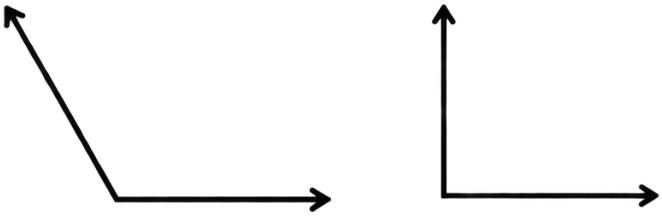
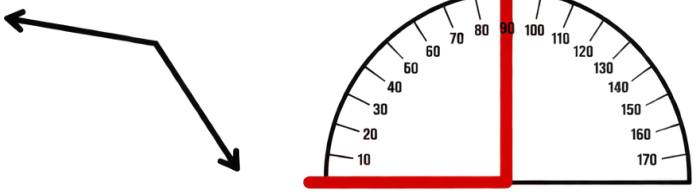
Directions: Help TORO better understand the different angles! Study the examples and nonexamples to determine what makes each type of angle unique. Then draw your own example and explain why it belongs in that category.

Examples of Right Angles	Non-Examples of Right Angles
	

Draw a right angle.

Right angles measure _____

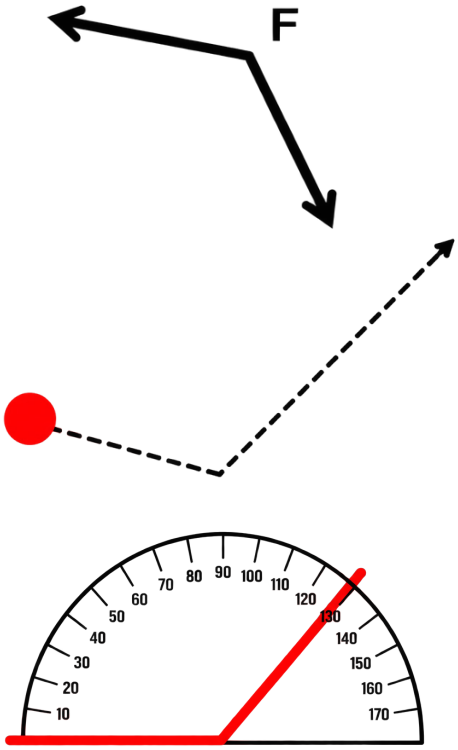
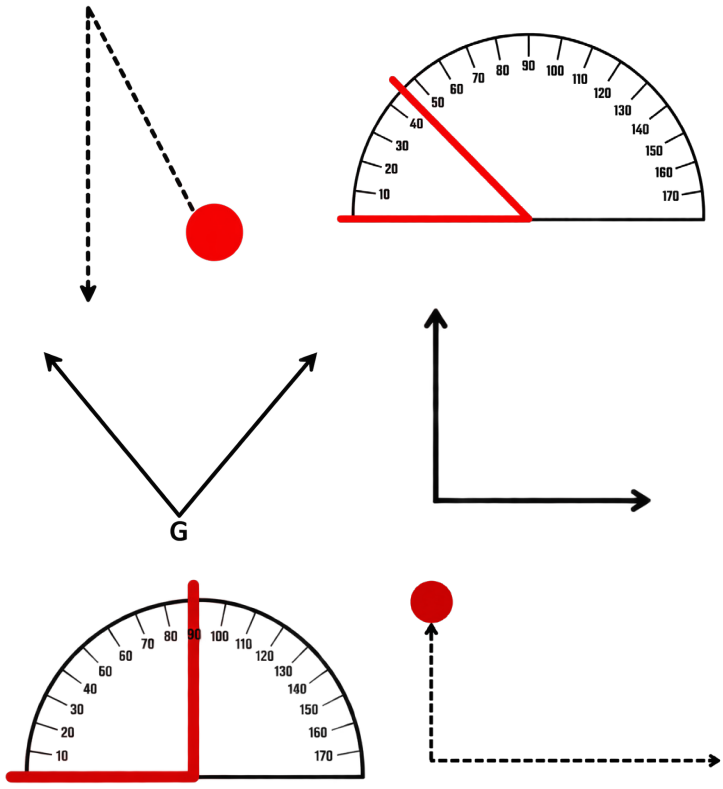
ANGLES

Examples of Acute Angles	Non-Examples of Acute Angles
 	  

Draw an acute angle.

Acute angles measure _____

ANGLES

Examples of Obtuse Angles	Non-Examples of Obtuse Angles
	

Draw an obtuse angle.

Obtuse angles measure _____ **and** _____

ALGEBRAIC REASONING

Algebraic Reasoning can help me... (check all that apply)

- ☐ Find a missing value
- ☐ Recognize a pattern
- ☐ Determine how quantities are related
- ☐ Use a rule to find an output
- ☐ Measure the length of an object

Which of these did you see in the video?

Use your Algebraic Reasoning skills to help TORO with the following!

TORO tosses 15 t-shirts during each break of the Texans game. Analyze the table and determine which rule describes the relationship between the number of breaks and the number of t-shirts tossed.

TORO'S T-SHIRT TOSS

NUMBER OF BREAKS	T-SHIRTS TOSSED
1	15
2	30
3	45
4	60



A. + 14
B. + 15
C. × 15
D. × 14

The input in TORO's T-Shirt Toss is _____

The output in TORO's T-Shirt Toss is _____

ALGEBRAIC REASONING

If the Texans start each play on the 20-yard line, what would be the ball's position after gaining each number of yards? Complete the table to show the ball's new position on the field after gaining each number of yards.

TORO MOVING DOWN THE FIELD: TEXANS BALL POSITION'S T-SHIRT TOSS

YARDS GAINED	FOOTBALL POSITION
1	
2	22
3	
4	24
5	25
6	
7	
8	
9	29
10	

Good job completing the table! Now, complete the sentence to describe the relationship between the yards gained and the football position.

The football's position equals the number of yards gained _____ 20 yards.

Review how Algebraic Reasoning can help you from the top of this worksheet. What are two ways you used Algebraic Reasoning to solve problems today?

LIQUID VOLUME

Circle the measurements that may be used to measure liquid volume.

INCHES 

GALLONS 

FEET 

POUNDS 

PINTS 

LIQUID OUNCES 

QUARTS 

CUPS 

Determine which measurement would be best for measuring each item below.

Water in a player's bottle.	Fluid ounces	Gallons
Water in a sideline cooler.	Fluid ounces	Gallons
Soda in a concession stand drink.	Fluid ounces	Gallons
Sports drink prepared for the entire team.	Fluid ounces	Gallons

Great job! Now, see if you can answer this challenge problem!

The equipment staff is making sports drinks for the players. They need 2 gallons of sports drink. They have containers that hold 4 cups each. How many containers are needed if there are 16 cups in a gallon?





MULTI-STEP OPERATIONS

In the video, you helped TORO and the equipment manager solve the following problem:

During Training Camp, at the beginning of the season there are 90 players on the Texans roster. By the time the regular season starts they have 37 fewer players on the team. Each of the remaining players gets 2 helmets plus 4 jerseys and 3 pairs of cleats. On gameday, how many of these items are in the locker room waiting for them? Show your thinking!

a. 155 helmets, 47 jerseys and 200 pairs of cleats

b. 106 helmets, 196 jerseys and 142 pairs of cleats

c. 98 helmets, 212 jerseys and 159 pairs of cleats

d. 106 helmets, 212 jerseys and 159 pairs of cleats



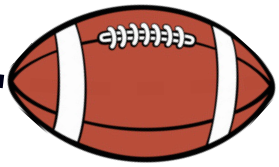




Great job! Because multistep problems require more than one step to solve, it can help to think about what you need to find first before you begin solving the problem.







MULTI-STEP OPERATIONS

The equipment manager has 60 footballs. He puts 8 footballs in each of 5 equipment bags. He leaves the rest of the footballs in the equipment room. How many footballs remain in the equipment room?



What should you find first? Explain why below.

- ☐ **How many footballs are placed in the equipment bags**
- ☐ **How many footballs remain in the equipment room**



Great! Now, solve the problem! How many footballs remain in the equipment room?

Awesome job! Now, let's help TORO think about the following problem.

TORO has 150 Texans t-shirts to give away to fans. Before the game, he gives 35 t-shirts to fans outside the stadium. During the game, he gives away 8 t-shirts during each of 6 breaks. How many t-shirts does TORO have left?



TORO used the following steps to solve the problem.

8 × 6 = 48

150 – 35 = 115

115 + 48 = 163

TORO says he has 163 t-shirts left. Is TORO correct? Explain why or why not.

FINANCIAL LITERACY

Help TORO match each word with the correct definition! Draw a line from the vocabulary word to the correct definition.

Income	**Money you spend**
Expenses	**Money you set aside for later**
Savings	**Money coming in or money you earn**

TORO uses his income to pay expenses, save for the future, and give to others. What do you think a budget helps TORO do?

A budget helps you _____

_____

TORO earns $1,000 each month. He needs to decide how to use his money or complete his budget. Below are some of TORO's expenses.



EXPENSES	AMOUNT
Truck payment for TORO's Ford F-150	$350
Phone	$130
Electricity	$230
Props	$30
Sneakers	$70

How much will TORO spend on his expenses? _____

How much money will TORO have remaining after paying his expenses?

_____

FINANCIAL LITERACY

TORO needs help deciding what to do with his remaining money! He wants to save some and give some to charity. He also wants some money left to spend on fun. Help TORO make a plan.

TORO'S PLAN	AMOUNT OF MONEY
Savings	$
Charity	$
Fun	$

Explain why you chose to use TORO's remaining money this way.

