

Name: _____

MEASUREMENT MISTAKES



1. Ralph and Sophia want to measure the length of a bookmark using a ruler, but can't agree on the proper way to measure. Sophia says you can place the bookmark anywhere next to the ruler and you will be able to tell how long it is. Ralph says you should line up the zero at the end of the ruler with one end of the bookmark and then look to see what number is closest to the other end of the bookmark. Who is correct?

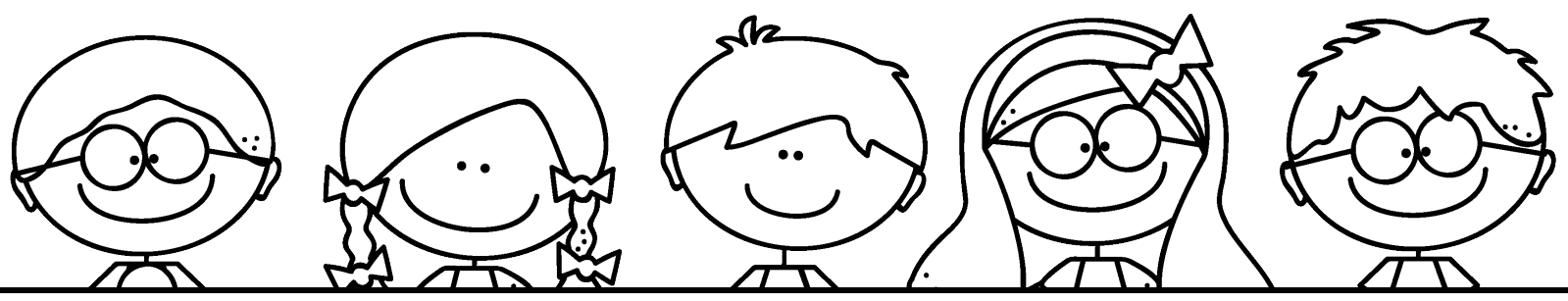
2. If Sophia and Ralph are using a ruler, in what units can they measure the length of the bookmark? What other units can you use to measure length that are not found on a ruler?



Name: _____

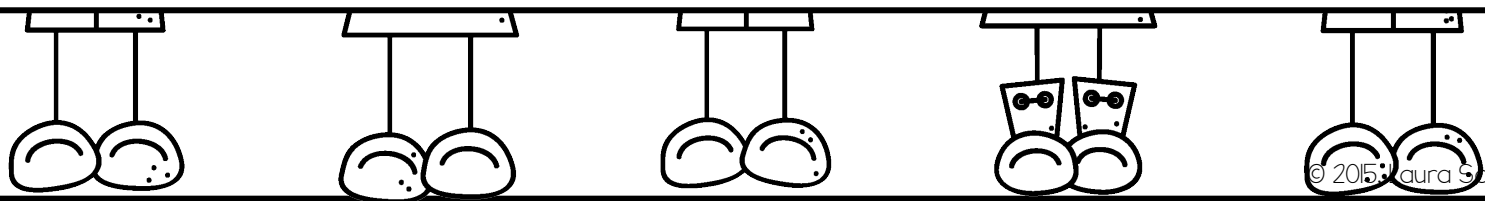
FOOT BY FOOT

If you measure the length of every person's foot in your class is the total length longer or shorter than 5 meters? Hint: You may not have everyone in class line up toe to toe. Think of a way to organize your data so no one's foot is left unmeasured.

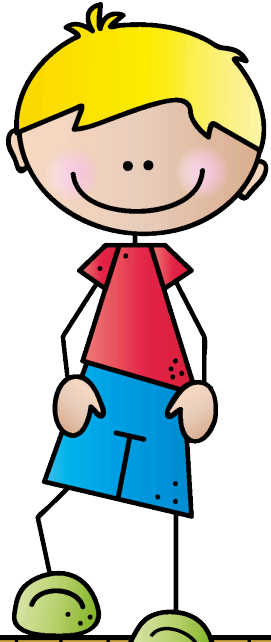


Whose foot length is closest to a customary foot (12 in)? _____

Whose foot length is farthest from a customary foot (12 in)? _____



MEASUREMENT GAMES



X MARKS THE SPOT

X MARKS THE SPOT

NUMBER OF PLAYERS: 2

OBJECTIVE:

X Marks the Spot will help you become more accurate when using a ruler to measure on from where you left off. Your goal is to measure in inches or centimeters to get to the spot marked with an X faster than your partner. Be sure to line up your ruler carefully so your measurement is accurate.

MATERIALS:

- One X
- One starting line
- One die
- One ruler for each player
- One counter for each player

SET UP:

1. Agree on a place to set up the starting line.
2. Agree on a place to set up the X.
3. Make sure each player has their ruler and a counter.
4. Decide if you will measure using in. or cm.
5. The youngest player goes first.

HOW TO PLAY:

1. Player 1 rolls the die and uses their ruler to measure the number of inches shown on the die (ex: if you roll a 4, measure 4 inches).
2. Place your counter on the spot you measured to.
3. Player 2 does the same.
4. On your next turn, measure from your counter instead of the starting line.
5. Continue until one player reaches the X.
6. Play another round!

TIPS:

Be sure to align the 0 on your ruler with the edge of your counter on each turn.



STARTING LINE



STARTING LINE



STARTING LINE



STARTING LINE



TEACHER TIP:

Print these starting lines and X's on cardstock paper, cut them along the bold black lines, then laminate them so they can be used year after year.

MEASUREMENT GAMES

MAKE A METER



MAKE A METER

NUMBER OF PLAYERS: 2

OBJECTIVE:

Make A Meter will help you understand that 10 centimeters make a decimeter and 10 decimeters make a meter. The goal of this game is to “build” a meter faster than your opponent.

MATERIALS:

- 20 base-ten ones cubes
- 20 base-ten tens rods
- 1 meter stick
- 1 die

SET UP:

1. Find an open area to play.
2. Give each player 10 ones cubes.
3. Give each player 10 tens rods.
4. Set the meter stick between the two players.
5. The player with the shortest hair goes first.

HOW TO PLAY:

1. Roll the die and place that number of ones cubes (equal to 1 cm. each) next to the meter stick, starting at 0. (ex: if you roll a 6, you put 6 cubes down.)
2. When you have built 10 centimeters, put the cubes back in a pile in exchange for a tens rod (equal to one decimeter).
3. Continue until one player has built a meter.

TIPS:

Be sure to line up your cubes and rods carefully with the 0 on the meter stick so your measuring is accurate.

HOW TO COMPLETE A TASK CARD

1st

RECORD THE QUESTION:

Write the task card question. Be sure to copy the question exactly as it appears on the task card. Highlight the most important parts of the question.

2nd

MODEL AND SOLVE:

Show how to solve the problem using drawings, models, diagrams, number sentences, and calculations. Be sure to include as much detail as possible so your reasoning is shown clearly.

3rd

SOLUTION:

Record your final answer in a complete sentence.

4th

EXPLAIN:

Write a detailed explanation that proves your answer is correct. If needed, use one of the sentence frames below to make your explanation clear.

- I can prove the answer is ____ because...
- I know _____, which proves the answer is _____.
- The strategy I used to solve this problem is...
- I know my answer is reasonable because...

MEASURING LENGTH SCHOLARLY SPEAK

**try to incorporate these words into your answers
and explanations as you solve each task card**

estimate	inch (in.)	ruler
approximate	foot (ft.)	yard stick
nearest	yard (yd.)	meter stick
actual	centimeter (cm.)	segment
accurate	meter (m.)	longer
reasonable	length	longest
combined	width	shorter
method	height	shortest

RECORD THE QUESTION:

MODEL AND SOLVE:

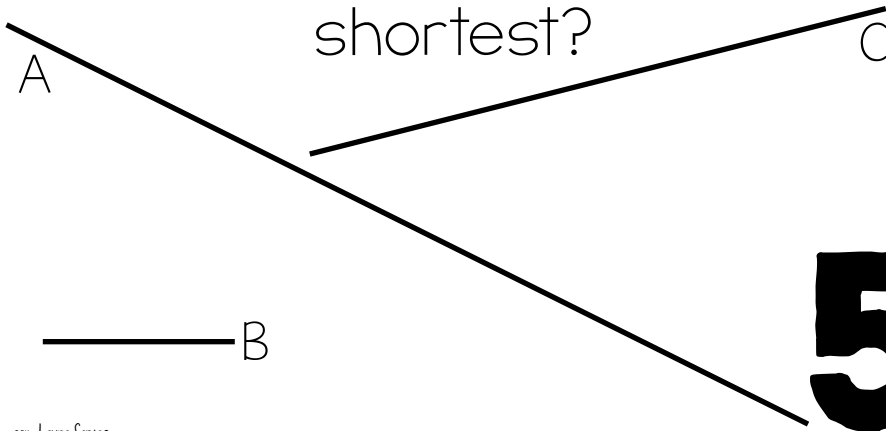
SOLUTION:

EXPLAIN:

TASK CARD #: _____

NAME: _____

Measure each line below using paper clips. Which line is the longest? Which line is the shortest?



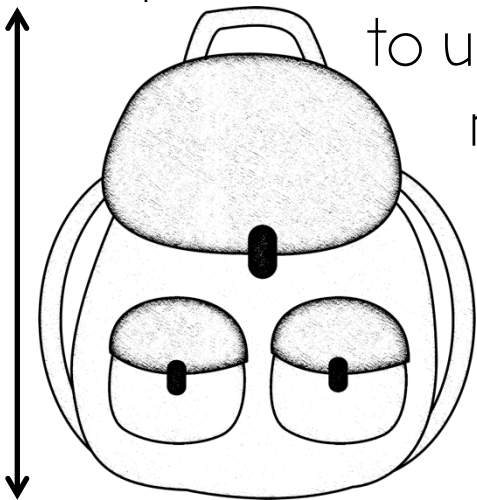
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How many inches long is your leg from your ankle to your knee?

6

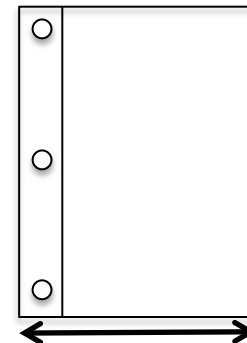
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Estimate the height of your backpack. Then describe how to use a ruler to measure the height in inches.



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Estimate the width of a piece of binder paper. Then describe how to use a ruler to measure the width in inches.



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Compare and contrast one meter and one yard.

17

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Brian says his toy truck is about 5 meters long. Is this a reasonable estimate?

18

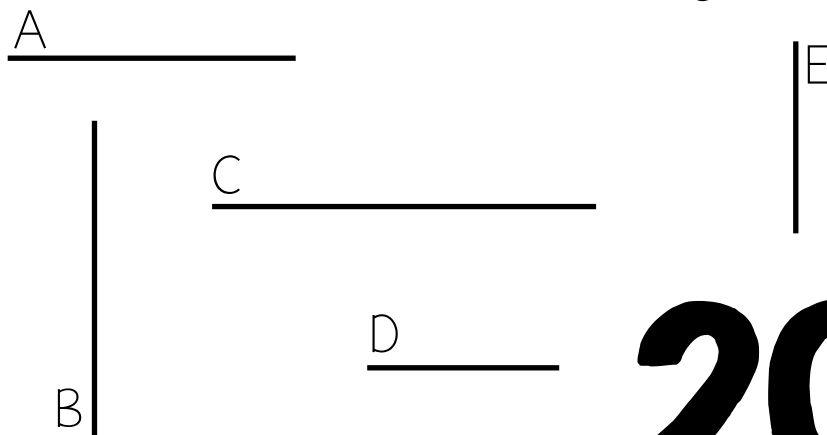
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Tommy is 2 meters tall.
Hyunwoo is 150 millimeters tall. Who is taller?

19

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Which of the lines below is 2 centimeters long?



20

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