

# Process Standards Rubric



## Measurement

Expectations Instructional programs from pre-kindergarten through grade 12 should enable all students to:	Exercise														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GOAL 1: Problem Solving <ul style="list-style-type: none"><li>build new mathematical knowledge through problem solving;</li><li>solve problems that arise in mathematics and in other contexts;</li><li>apply and adapt a variety of appropriate strategies to solve problems;</li><li>monitor and reflect on the process of mathematical problem solving.</li></ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 2: Reasoning & Proof <ul style="list-style-type: none"><li>recognize reasoning and proof as fundamental aspects of mathematics;</li><li>make and investigate mathematical conjectures;</li><li>develop and evaluate mathematical arguments and proofs;</li><li>select and use various types of reasoning and methods of proof.</li></ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 3: Communication <ul style="list-style-type: none"><li>organize and consolidate their mathematical thinking through communication;</li><li>communicate their mathematical thinking coherently and clearly to peers, teachers, and others;</li><li>analyze and evaluate the mathematical thinking and strategies of others;</li><li>use the language of mathematics to express mathematical ideas precisely.</li></ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 4: Connections <ul style="list-style-type: none"><li>recognize and use connections among mathematical ideas;</li><li>understand how mathematical ideas interconnect and build on one another to produce a coherent whole;</li><li>recognize and apply mathematics in contexts outside of mathematics.</li></ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 5: Representation <ul style="list-style-type: none"><li>create and use representations to organize, record, and communicate mathematical ideas;</li><li>select, apply, and translate among mathematical representations to solve problems;</li><li>use representations to model and interpret physical, social, and mathematical phenomena.</li></ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SAMPLE



# Task Sheet 1

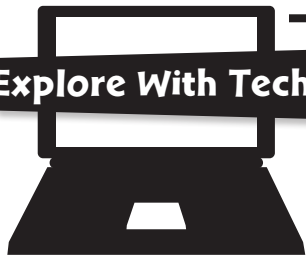
## Touch The Sky

- 1) Stephanie is editing the tenth edition of *World's Tallest Buildings*. As part of her job, she needs to convert the following heights of the several skyscrapers from feet to meters. Look at the table below and then help her convert the building heights from feet to meters.



Building	Height in Feet	Height in Meters
Willis Tower	1450 (Chicago)	
Citic Plaza	1283 (China)	
Empire State Building	1250 (New York)	
Central Plaza	1227 (Hong Kong)	
Emirates Tower One	1165 (U.A.E)	
John Hancock Center	1127 (Chicago)	
Chrysler Building	1043 (New York)	
Bank of America Plaza	1023 (Atlanta)	
Library Tower	1013 (Los Angeles)	
Commerzbank Tower	981 (Germany)	

### Explore With Technology



Use the Internet to find information about other famous skyscrapers throughout the world. Find three other buildings that could be added to this list above. List the buildings below, and write their height in feet and meters.

Building One: \_\_\_\_\_

Building Two: \_\_\_\_\_

Building Three: \_\_\_\_\_



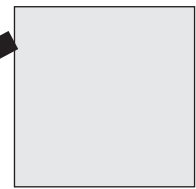
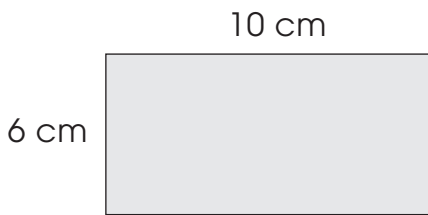
# Drill Sheet 1

## Conversions

- a) 1.5 m = \_\_\_\_\_ cm      27 ft = \_\_\_\_\_ yards      180 in = \_\_\_\_\_ ft  
 2.5 oz = \_\_\_\_\_ lbs      2.5 g = \_\_\_\_\_ mg      .25 ton = \_\_\_\_\_ lbs  
 4 cups = \_\_\_\_\_ pints      330 L = \_\_\_\_\_ kL      2 gallons = \_\_\_\_\_ quarts  
 18 ft = \_\_\_\_\_ yds      2.5 km = \_\_\_\_\_ m      27 yd = \_\_\_\_\_ in

## Area and Perimeter

Look carefully at the three figures below. Calculate the area and perimeter using the measurements provided.



- b) Area: \_\_\_\_\_      c) Area: \_\_\_\_\_      d) Area: \_\_\_\_\_  
 Perimeter: \_\_\_\_\_      Perimeter: \_\_\_\_\_      Perimeter: \_\_\_\_\_

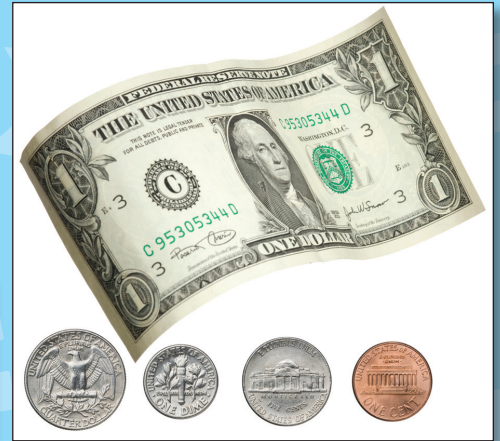
## Short Answers

- e) What is the volume of a tank with a length of 4 feet (1 meter), width of 5 feet (2 meters), and a height of 3 feet (0.9 meters)?  
 \_\_\_\_\_
- f) What temperature is 20° below the boiling point on the Fahrenheit (Celsius) scale?  
 \_\_\_\_\_
- g) An angle that is four-fifths the size of a right triangle would be this many degrees.  
 \_\_\_\_\_
- h) What is the formula for finding the area of a circle?  
 \_\_\_\_\_
- i) How many meters (feet) are in a 5 km (3 mile) race?  
 \_\_\_\_\_

# Money, Money, Money



You have been assigned to work with a design committee to create a new denomination of coin or bill. Your task is to complete the following tasks as you prepare to release the newest denomination within the year.



a) Determine which new denomination of coin or bill would be useful to the public.

b) Create a name for this new denomination.

c) Explain why this new denomination would be beneficial to consumers.

d) Select a person to appear on the front of the new coin or bill. This person should be a figure from history who had a positive impact. Explain why this person should appear on a unit of currency.

e) Design the new coin or bill and how it would look.

f) Unveil the new design for your classmates. Show ten ways it can be combined with other denominations to make change (for example if you invented the nickel,  $\$1.00 + \text{a nickel} = \$1.05$ ).

**SAMPLE**