Measurement – Drill Sheets

Drills

Column headers (drills): Warm-up 1, Timed Drill 1, Timed Drill 2, Warm-up 2, Timed Drill 3, Timed Drill 4, Warm-up 3, Timed Drill 5, Timed Drill 6, Warm-up 4, Timed Drill 7, Timed Drill 8, Warm-up 5, Timed Drill 9, Warm-up 6, Timed Drill 10, Timed Drill 11, Review A, Review B, Review C

Expectations
Instructional programs from pre-kindergarten through grade 12 should enable all students to:

GOAL 1: Problem Solving
- build new mathematical knowledge through problem solving;
- solve problems that arise in mathematics and in other contexts;
- apply and adapt a variety of appropriate strategies to solve problems;
- monitor and reflect on the process of mathematical problem solving.

GOAL 2: Reasoning & Proof
- recognize reasoning and proof as fundamental aspects of mathematics;
- make and investigate mathematical conjectures;
- develop and evaluate mathematical arguments and proofs;
- select and use various types of reasoning and methods of proof.

GOAL 3: Communication
- organize and consolidate their mathematical thinking through communication;
- communicate their mathematical thinking coherently and clearly to peers, teachers, and others;
- analyze and evaluate the mathematical thinking and strategies of others;
- use the language of mathematics to express mathematical ideas precisely.

GOAL 4: Connections
- recognize and use connections among mathematical ideas;
- understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
- recognize and apply mathematics in contexts outside of mathematics.

GOAL 5: Representation
- create and use representations to organize, record, and communicate mathematical ideas;
- select, apply, and translate among mathematical representations to solve problems;
- use representations to model and interpret physical, social, and mathematical phenomena.

(SAMPLE watermark printed across the rubric table)

8 Minutes

14a) The calendar below shows the daily high and low temperatures in Carver City for a five day period in July. Read the information, then answer the questions that follow.

Monday	Tuesday	Wednesday	Thursday	Friday
High: 75.6°F (24.2°C)	High: 77.2°F (25.1°C)	High: 77.9°F (25.5°C)	High: 78.4°F (25.8°C)	High: 72.7°F (22.6°C)
Low: 58.3°F (14.6°C)	Low: 56.8°F (13.8°C)	Low: 52.5°F (11.4°C)	Low: 60.3°F (15.7°C)	Low: 54.8°F (12.7°C)

i) Calculate the difference between the high and low temperatures for each day.

Day:	Monday	Tuesday	Wednesday	Thursday	Friday
Difference:					

ii) What is the average high for the week? _____

iii) What is the average low for the week? _____

iv) What is the mean temperature for each day?

Day:	Monday	Tuesday	Wednesday	Thursday	Friday
Mean:					

v) What day has the greatest difference between high and low? _____

vi) What day has the smallest difference between high and low? _____

vii) What is the difference between the highest and lowest temperature during the week?
_____

Explore With Technology

Find the high and low temperatures for the previous week for your own city and fill out the chart below accordingly.

Day:	Monday	Tuesday	Wednesday	Thursday	Friday
High:					
Low:					
Difference:					
Mean:					

Review A

a) Convert the following measurements.

i) 20 ft = _____ in

ii) 480 mm = _____ cm

iii) 176 oz = _____ lbs

iv) 500 m = _____ km

v) 72 ft = _____ yd

vi) 7.5 kL = _____ L

vii) 128 qts = _____ gallons

viii) 2.5 m = _____ cm

ix) 45 ft = _____ yd

x) 7 km = _____ mm

xi) 4.5 cup = _____ pt

xii) 12 L = _____ mL

xiii) 18.5 ft = _____ in

xiv) 29. 7 g = _____ mg

xv) 25 lbs = _____ oz

b) Answer the following quick measurement questions.

i) Jaime measured the temperature of a warm liquid. The temperature started at 72°F (22°C) and dropped 2.5 degrees every minute for three minutes. What was the temperature of the liquid after 3 minutes? _____

ii) A rectangle had an area of 2.5 square inches (16 square cm). What are two possible combinations for the length and width of the rectangle?

_____

iii) Tyrone ran a 5 mile (8 km) race. How many total feet (meters) did he run?

_____

iv) If a car weighs 3.6 tons, how many pounds (kilograms) does it weigh?

_____

v) A triangle has a base of 6 inches (150 mm) and a height of 1 inch (25.5 mm). What is the area of the triangle? _____

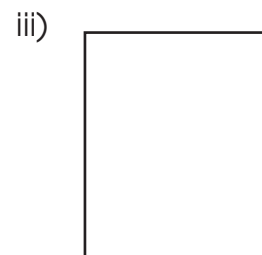vi) What is the perimeter of a square with a side measuring 3.5 inches (9 cm)?

_____

c) Use a ruler to measure the objects below. Find the area for each object.

i)

Area = _____

ii)

Area = _____

iii)

Area = _____

SAMPLE
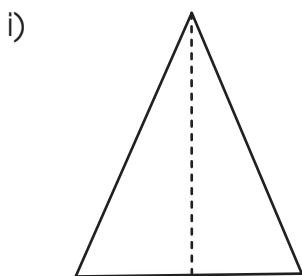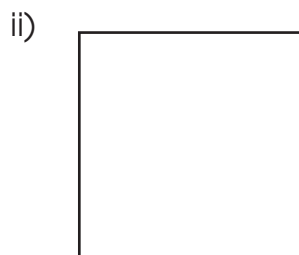
To Scale

Think about the layout of your school. In small groups, draw a map of your entire school to scale. If possible, work with others to determine the perimeter measurements of your school, as well as interior measurements. Then, working with a teacher or adult, complete the following.

– Select a scale in which to draw your map. For example, 1 inch (1 cm) on your map may equal 10 feet (1.2 meters) in your school. Label the scale on your drawing.
– Draw the perimeter of your school first. Make sure to label the perimeter on your map.
– Draw interior rooms on your map.
– Label the area of your school.
– Identify your classroom. Label the area of your classroom.
– Label important structures in your school.
– Find the perimeter of another room in your school. Make sure you have permission first.

When done, compare your drawings with those of your classmates. Which scale was easiest to work with? Which scale was most difficult? What complications arose in the development of the map?

First, as a class, draw the layout of your classroom below.