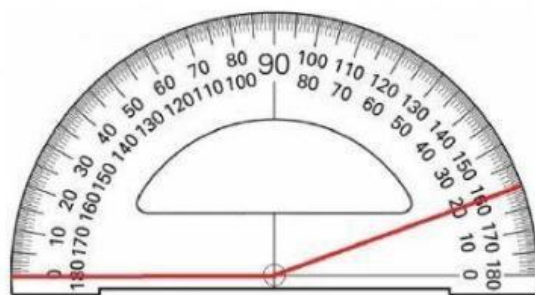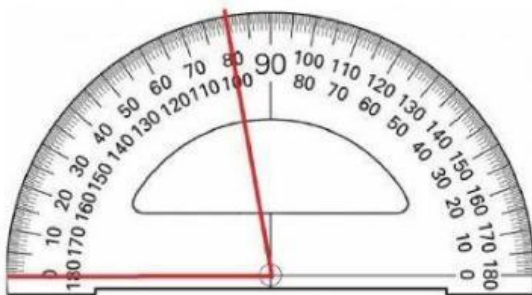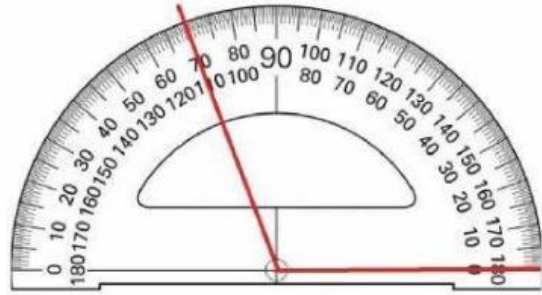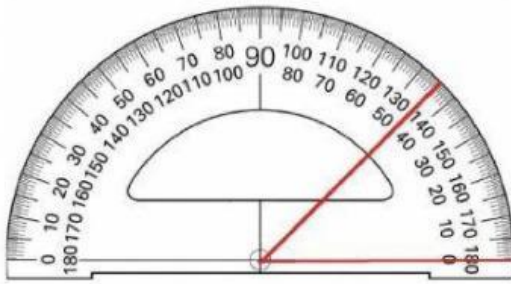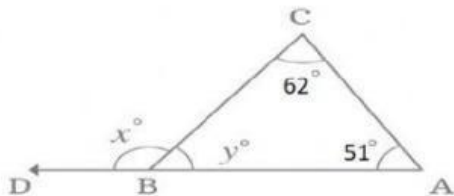# 7TH Grade Math EXIT TEST – Part 3

Measuring Angles with a Protractor

Hint: angles facing the right will be the inside numbers and angles facing left will be the outside numbers

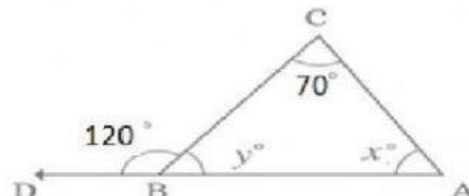## Interior & Exterior Angles of a Triangle

Hint: A straight line is 180° and the sum of all angles in a triangle is 180°. A right angle is 90°

x = [ ] °

y = [ ] °

x = [ ] °

y = [ ] °

Finding the Missing Angle of a Triangle

Question 1: Find the size of each missing angle.

(a)

[ ] °

(b)

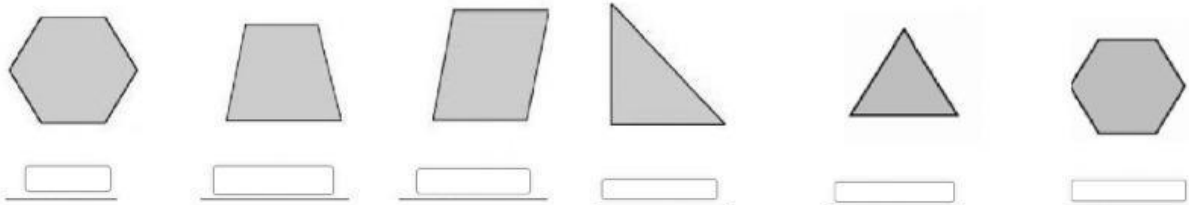

[ ] °

(c)

[ ] °

LIVEWORKSHEETS
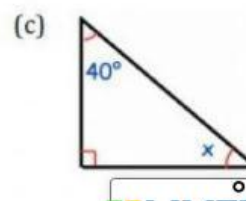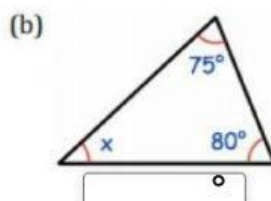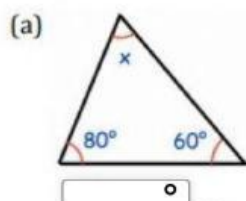
POLYGONS & POLYHEDRONS

Regular & Irregular Polygons

Irregular Polygons are 2 -dimensional (2D) shapes of which the sides and interior angles are not the same.

A **regular polygon** is a shape where all sides are the same length and all the interior angles are the same.

[ ]   [ ]   [ ]   [ ]   [ ]   [ ]

Measuring the Angle of a Polygon

Interior angles of Polygon

Number of sides(n)	$(n-2) \times 180^0$	Total Interior angle
Triangle 3- Sides	1x180	180
Pentagon 4 – sides	X	[ ]
Hexagon 6 – sides	X	[ ]
Octagon 8- sides	X	[ ]
12- sides	X	[ ]

Area of a Rectangle

(Area = length x width)

6cm
3cm
cm

6cm
6cm
cm

5cm
9cm
cm

8cm
2cm
cm
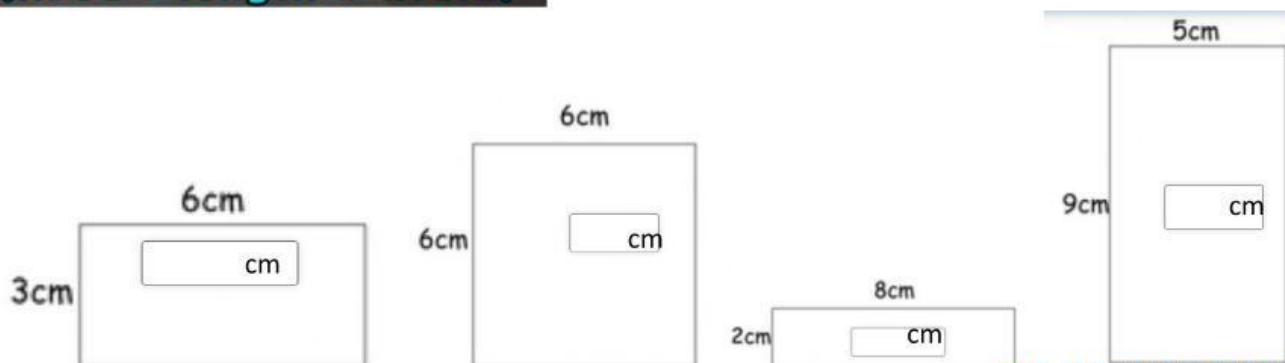
Pentagon, Hexagon, & Octagon

1. It has 5 sides and 5 angles
   a. Pentagon
   b. Hexagon
   c. Octagon

2. It has 6 sides and 6 angles
   a. Hexagon
   b. Octagon
   c. Pentagon

3. It has 2 rays connected by a point
   a. Side
   b. Angle
   c. Face

4. It has 8 sides and 8 angles
   a. Octagon
   b. Hexagon
   c. Pentagon

Prisms: Area & Volume

3 cm   8 cm   4 cm

L		H		W
	x		x	

Volume: _____ cm³

9 cm   4 cm   8 cm

L		H		W
	x		x	

Volume: _____ cm³

4 cm   4 cm   4 cm

L		H		W
	x		x	

Volume: _____ cm³
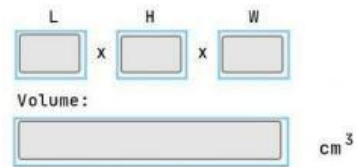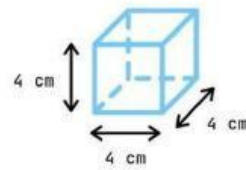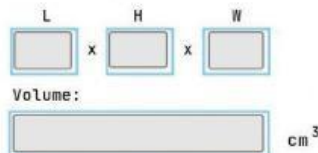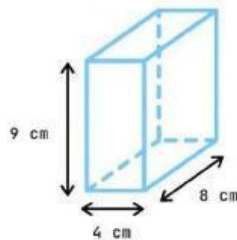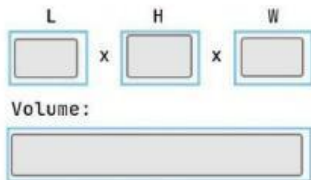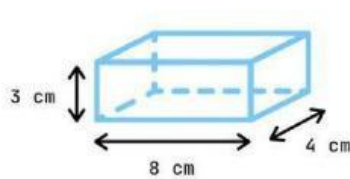
Surface Area of a Cube

Surface Area = L x W x 6

B — 2 UNITS
C — 3 UNITS
D — 4 UNITS
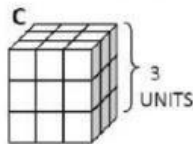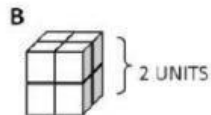
B – Surface Area = _____ x _____ x 6 = _____

C – Surface Area = _____ x _____ x 6 = _____

D – Surface Area = _____ x _____ x 6 = _____

10 cm   10 cm

Area of 1 face = [____] cm x [____] cm = [____] square cm

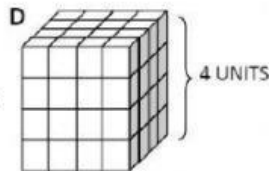Total surface area = [____] cm² x [____] = [____] cm²

11 cm   11 cm
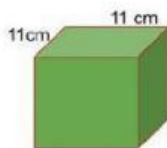
Area of 1 face = [____] cm x [____] cm = [____] square cm

Total surface area = [____] cm² x [____] = [____] cm²

Perimeter & Area of a Composite Shape

Area = L x W

Perimeter – Add all sides

Area

Shape A - ___ x ___ = ____

Shape B - ___ x ___ = ____

____ + ____ = ____

Perimeter

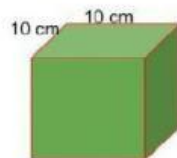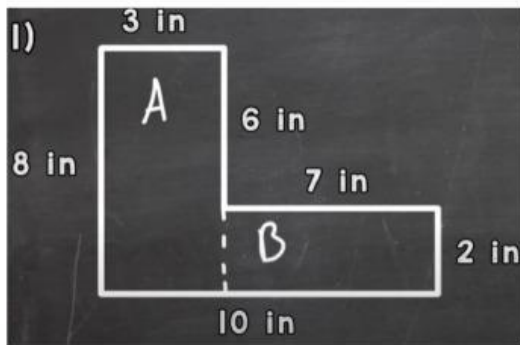8 + ___ + 6 + ____ + ____ + 10 = ____

METRIC SYSTEM & MEASUREMENTS

Unit Conversion & Dimensional Analysis

Customary Units of Measurement – Chart

Length	Weight	Capacity	Time
12 in = 1 ft	16 oz = 1lb	128 fl oz = 1 gal	60 sec = 1 min
3 ft = 1 yrd	2000 lb = 1 ton		60 min = 1 hr
		2 pt = 1 qt	24 hr = 1 day
5,280 ft = 1 mi			7 days = 1 wk
		8 pt = 1 gl	52 wk = 1 yr
			12 mon = 1 yr
1,760 yrd = 1 mi		4 qt = 1 gal	365 days = 1 yr

a) 5 ft = _____ inches

b) 3 miles = _____ feet

c) 36 inches = _____ feet

d) 4 pounds (lbs.) = _____ ounces

e) 6 tons = _____ pounds (lbs.)

f) 7 quarts (qts.) = ____ pints (pts)

g) 2 gallons = _____ quarts (qts)

h) 18 pints = _____ quarts (qts)

Converting Units in the Metric System **(Hint: Add commas to answers)**

Convert Metric Units of Length
(mm, cm, m, km)

1 km = 1,000 m   1 m = 100 cm

1 m = 1,000 mm   1 cm = 10 mm

532 cm = [_____] mm

411 m = [_____] mm

917 m = [_____] mm

37 m = [_____] cm

Converting Units of Time

Use these clues to help you convert between units of time. You can also use a calculator to help you with larger numbers.

60 seconds = 1 minute	60 minutes = 1 hour
24 hours = 1 day	7 days = 1 week
2 weeks = 1 fortnight	28 to 31 days = 1 month
12 months = 1 year	52 weeks = 1 year
365 days = 1 year	366 days = 1 leap year
10 years = 1 decade	100 years = 1 century
1000 years = 1 millennium	

120 minutes = [   ] hours

2 decades = _____ years

2 years = _____ weeks

48 hours = _____ days

90 seconds = _____ minutes

3 weeks = _____ days

2 fortnights = _____ weeks

80 years = _____ decades

4 centuries = _____ years

Mass: Formulas & Unit Conversion

Convert Metric Units of Mass
(mg, g, kg)
1 kg = 1,000 g   1 g = 1,000 mg
1 kg = 1,000,000 mg

1.   3 kg = _____ g
2.   8 kg = _____ g
3.   5,000 g = _____ kg

Estimated & Precise Measurements

Note: 1 centimeter (cm) = 10 millimeters (mm)

Convert the given measures to new units.

1. 70 cm = [   ] mm   2. 30 cm = [   ] mm

3. 90 mm = [   ] cm   4. 20 cm = [   ] mm
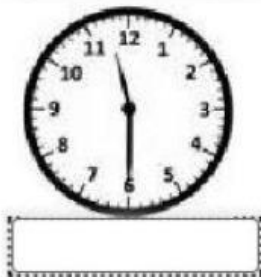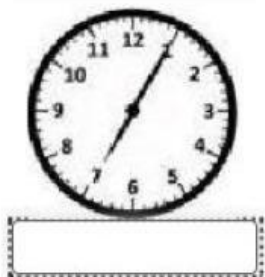
5. 80 mm = [   ] cm   6. 40 mm = [   ] cm

Elapsed Time

Find the start time, end time and elapsed time for each problem.

Start time	End time	Elapsed time

Measuring Units of Temperature

Write the temperature indicated on each thermometer.

1) ____ °C 2) ____ °C 3) ____ °C 4) ____ °C