Apprenticeship Math 12

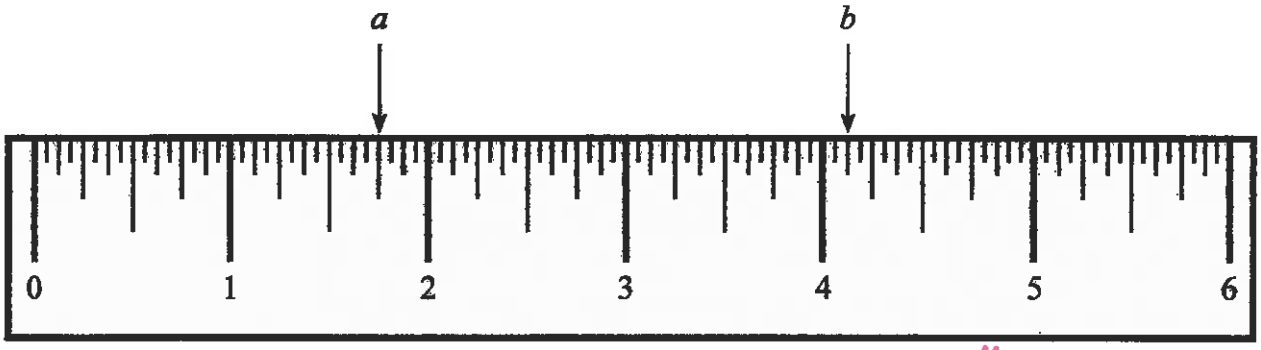
ASSIGNMENT: Measurement Review (part 1)

Name: Key

Date: _____

Imperial	Imperial and SI	SI
1 foot = 12 inches	1 inch = 2.54 cm	1 cm = 10 mm
1 yard = 3 feet	1 foot = 30.48 cm	1 m = 100 cm
1 yard = 36 inches	1 yard = 0.9144 m	1 m = 1000 mm
1 mile = 1760 yards	1 mile ≈ 1.609 km	1 km = 1000 m
1 mile = 5280 feet		

1. Identify the location of each position on the imperial ruler:



a) $1\frac{3}{4}$"

b) $4\frac{1}{8}$"

2. Convert the following measurements to feet and inches (e.g. 5'10"):

a) 28 inches — 2 ft 4 in

↑ 12 goes in 2 times (2 ft)

$2 \times 12 = 24$

$28 - 24 = 4$ left over (4 in)

b) $77\frac{7}{16}$ inches — 6 ft $5\frac{7}{16}$ in

↑ 12 goes in 6 times (6 ft)

$6 \times 12 = 72$

$77\frac{7}{16} - 72 = 5\frac{7}{16}$

3. Convert the following. If rounding is necessary, give your answer to the nearest hundredth.

a) 2.2 mi

$\frac{1\text{ mi}}{5280\text{ ft}} = \frac{2.2\text{ mi}}{x}$

$x = 11616\text{ ft}$

11 616 ft

b) 9 ft 7 in

$9 \times 12 = 108$, $108 + 7 = 115$ in

$\frac{1\text{ yd}}{36\text{ in}} = \frac{x}{115\text{ in}}$

$x = 3.19\text{ yd}$

3.19 yd

c) 7.5 km

km → m: $7.5 \times 1000 = 7500$ m

m → cm: $7500 \times 100 = 750000$ cm

750 000 cm

d) $7\frac{2}{3}$ yd $\quad 2 \div 3 = 0.\overline{6}$

$\frac{1\text{ yd}}{36\text{ in}} = \frac{7.67\text{ yd}}{x}$

$x = 276$ in

$\frac{1\text{ in}}{2.54\text{ cm}} = \frac{276\text{ in}}{x}$

$x = 701.04$ cm

7010.4 mm

cm → mm: $701.04 \times 10 = 7010.4$

e) 142 cm $\quad \div 100 = 1.42$ m

$\frac{1\text{ yd}}{0.9144\text{ m}} = \frac{x}{1.42\text{ m}}$

$x = 1.55\text{ yd}$

1.55 yd

4. Steve Nash is 6'3" tall. Shaquille O'Neal is 7'1" tall. What is the difference between their heights in centimetres? Round your answer to the nearest tenth.

$6'3" = (6 \times 12) + 3 = 75"$

$7'1" = (7 \times 12) + 1 = 85"$

$85 - 75 = 10"$

$\frac{1\text{ in}}{2.54\text{ cm}} = \frac{10\text{ in}}{x}$

$x = 25.4$ cm

25.4 cm

5. While traveling in the United States you see a sign that says the next gas station is 110 miles away. You look at your fuel gauge and know that you have enough gas left for about 150 km. Do you have to stop now for gas, or do you continue driving?

$\frac{1\text{ mi}}{1.609\text{ km}} = \frac{110\text{ mi}}{x}$

$x = 176.99$ km → too far!

STOP NOW for gas