ALGEBRA I

NAME: Key

CONVERSIONS AND RATES *RETAKE PRACKET* 2   PER: _____

SHOW ALL WORK FOR YOUR CONVERIONS.CIRLCE YOUR FINAL ANSWERS AND ROUND TO THE TENTHS PLACE.

1. For the current Cleveland Browns football season, running back Trent Richardson has 400 totalyards. What is his total in inches?

$$\frac{400 \text{yd}}{} \cdot \frac{3 \text{ft}}{1 \text{yd}} \cdot \frac{12 \text{in}}{1 \text{ft}}$$

$\boxed{14400 \text{ in}}$

2. A pumpkin pie recipe calls for 2 (5 oz) can of pumpkin. If you need to triple the recipe, how many grams of can pumpkin will you need?

1 oz = 28.4 g

$$\frac{10 \text{oz}}{1} \cdot \frac{28.4 \text{g}}{1 \text{oz}}$$

$\boxed{284 \text{g}} \cdot 3 \quad \boxed{852 \text{g}}$

3. A chocolate chip cookie recipe calls for 6 cups of all purpose flour. How many pints of flour does the recipe call for?

$$\frac{6 \text{c}}{1} \cdot \frac{2 \text{c} / 1 \text{pt}}{1 \text{pt} / 2 \text{c}}$$

$\boxed{3 \text{ pt}}$

4. The U.S. men's 4x100 meter relay earned a silver medal at the 2012 London Olympics. The team swam the relay with a time of 3 minutes and 10 seconds. France won gold with a time of 3 minutes and 9 seconds. What was FRANCE'S speed in feet per hour? (5)

1 ft = 0.305 m

$$\frac{400 \text{m}}{3 \text{min} \, 9 \text{sec}} \cdot \frac{1 \text{ft}}{.305 \text{m}}$$

$\boxed{21768.71 \text{ ft} / h}$
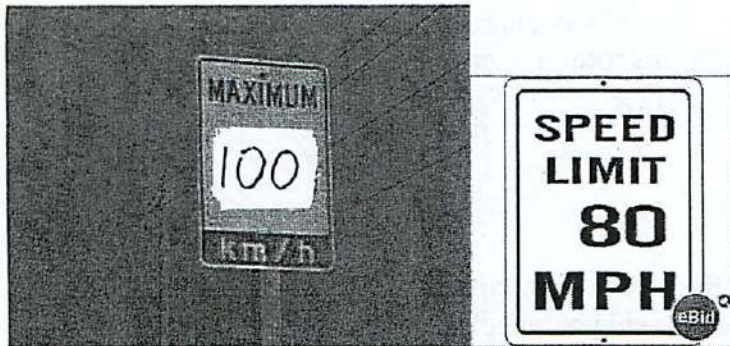
$$3 \text{min} \cdot \frac{60 \text{sec}}{1 \text{min}} = 180 \text{sec}$$

$$\frac{400 \text{m}}{189 \text{sec}} \cdot \frac{1 \text{ft}}{.35 \text{m}} \cdot \frac{60 \text{sec}}{1 \text{min}} \cdot \frac{60 \text{min}}{1 \text{h}}$$

$$21768.76$$

5. Which speed limit would allow you to reach your destination faster? SHOW ALL WORK to support your answer AND explain why. (4)

1 mi ≈ 1.61 km

MAXIMUM 100 km/h

SPEED LIMIT 80 MPH

$\dfrac{100\ km}{1\ h} \cdot \dfrac{1\ mi}{1.61\ km}$

$= 62.1\ mph$

80 mph would allow to reach the destination since 80mph is faster than 100km (62.1mph)

7. Convert 300 cm to m. (2)
ft/year (5)

$\dfrac{300\ cm}{1} \cdot \dfrac{1m}{1000\ cm}$ ⟶ (3 m)

9. Convert 7 quarts to ml. (3)
(2)

1 qt ≈ 0.946 L

$\dfrac{7\ qt}{1} \cdot \dfrac{.946\ L}{1\ qt} \cdot \dfrac{1000\ mL}{1\ L}$

(6622 ml)

8. Convert 10 in/min to

$\dfrac{16\ in}{1\ min} \cdot \dfrac{1\ ft}{12\ in} \cdot \dfrac{60\ min}{1\ hr} \cdot \dfrac{24\ h}{1\ day} \cdot \dfrac{365\ d}{1\ yr}$

$\dfrac{525\,6000}{12}$ (438000) ft/yr.

10. Convert 2400 pounds to tons

$\dfrac{2400\ lbs}{1} \cdot \dfrac{1\ Ton}{2000\ lbs}$

(1.2 tons)