Name _____   **Date _____**

Convert Measurements with Ratios: Play Answer Sheet

Selected-Response Items—Indicate the letter(s) only.

1. _____   2. _____   3. _____

4. _____   5. _____   6. _____

7. _____   8. _____

Fill-in-the-Blank Items

9. _____   10. _____   11. _____

12. (a)_____   (b)_____   (c)_____   (d)_____

    (e)_____   (f)_____   (g)_____   (h)_____

13. (a)_____   14. (a)_____   15. (a)_____

    (b)_____   (b)_____   (b)_____

    (c)_____   (c)_____

               (d)_____

Convert Measurements with Ratios: Play

Number of Questions: 15

Questions 1–8 are selected-response questions. Write the letters of the correct answers on the answer sheet.

1. Which of the following tables demonstrate how a conversion factor is a unit rate that can be used to find equivalent ratios? *Select all that apply.*

   A.

ft	in.
1	12
2	24
3	36

   B.

in.	in.
1	4
2	8
3	12

   C.

in.	cm
1	2.54
2	5.08
3	7.62

   D.

in.	cm
1	2.54
2	5.08
3	7.62

2. In all, Ruby spent 28,800 seconds gardening last month. Find how many hours are in 28,800 seconds.

   Use the following unit rates: 60 seconds per minute, 60 minutes per hour.

   A. 8 hr **B.** 80 hr **C.** 48 hr **D.** 4.8 hr

3. What is the missing value? Use the conversion factor: 1,000 mL = 1 L.

   180 mL = _____ L

   A. 18 **B.** 1.8 **C.** 0.18 **D.** 0.018

4. The Lincoln Memorial in Washington, DC weighs 38,000 tons.

   How many pounds is this? *(2,000 lb = 1 T)*

   A. 380,000 lb **B.** 38,000,000 lb **C.** 7,600,000 lb **D.** 76,000,000 lb

5. Flora is making hamburgers for a cookout. Each burger will be made from 4 ounces of ground beef.

   How many burgers can Flora make from $2\frac{1}{2}$ pounds of ground beef? *(16 oz = 1 lb)*

   A. 6 burgers **B.** 8 burgers **C.** 10 burgers **D.** 16 burgers

6. Randy is sewing together pieces of fabric to make a backdrop for the school play. There are 18 pieces of fabric, and each piece is 14 inches long.

   How long will the completed backdrop be? *(12 in. = 1 ft)*

   A. 3,024 ft   **B.** 252 ft   **C.** 25.2 ft   **D.** 21 ft

7. A science teacher uses a metric scale to weigh some of the rocks in the science lab. The masses of the rocks are 14 grams, 32 grams, 111 grams, 86 grams, and 127 grams.

   What is the combined mass of the rocks in kilograms? *(1,000 g = 1 kg)*

   A. 0.37 kg   **B.** 3.7 kg   **C.** 37 kg   **D.** 370 kg

8. Javier is taking a trip to Japan. He has saved $50 to spend on souvenirs while on his trip. He did some research and found six common souvenirs from Japan that interested him: scroll, lantern, Maneki Neko (cat statue), traditional doll, fan, and paper umbrella.

   Javier plans to spend all of his money while in Japan. The prices for each item are listed below.

   The currency conversion rate is 120 yen:1 dollar. Select a combination of souvenirs that uses his entire $50.

   A. scroll: 2,200 yen   **B.** lantern: 1,200 yen   **C.** Maneki Neko: 800 yen

   D. doll: 3,800 yen   **E.** fan: 500 yen   **F.** umbrella: 1,800 yen

Questions 9–15 are fill-in-the-blank questions. Write the correct answers in the spaces provided on the answer sheet.

9. Write the missing value.

   You can use the table to help you.

Gallons	Cups
1	16
2	32
3	48
4	64

   576 c = _____ gal

10. A coach brings 12 liters of water in a cooler to a game. She distributes water in servings of 400 milliliters per serving.

    If she distributes 18 servings, how many liters of water are left in the cooler? *(1,000 mL = 1 L)*

    _____ L

11. Three sixth-grade boys are comparing their weights to determine who weighs the most and who weighs the least. They decide to weigh themselves in different units of measure. The weights of the three boys are 50 kilograms, 105 pounds, and 1,712 ounces. Order the boys from greatest to least based on their weights.

Choose from the following unit rates to help you solve the problem: 16 ounces per pound, $\frac{1}{6}$ pound per ounce, 0.45 kilograms per pound, 2.2 pounds per kilogram.
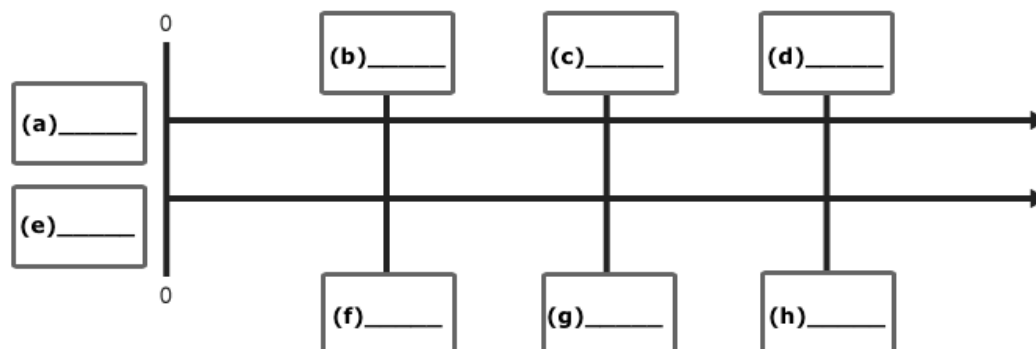
Greatest to least: _____

A. 50 kg **B.** 105 lb **C.** 1,712 oz

12. Given that there are 36 inches in 1 yard, use the double number line to convert 216 inches to yards.

Use the options below to complete the number line.

A. yards **B.** inches **C.** 12 **D.** 36 **E.** 324

F. 1 **G.** 6 **H.** 108 **I.** 3 **J.** 4

K. 2 **L.** 64 **M.** 216

13. Sylvia's coach is asking her to run various miles, but the course she practices on only marks distance in yards.

Complete the table to help Sylvia determine how many miles she has run based on her yardage.

Miles	Yards
$\frac{1}{2}$	(a)_____
1	1,760
$1\frac{1}{2}$	(b)_____
2	(c)_____

14. Four students are heading to school in the morning. The students choose to run, bike, skateboard, and scooter to school. Help the students determine who is traveling the fastest by converting the rates to miles per hour.

You can use the following conversion factors:

12 in. = 1 ft   3 ft = 1 yd   1,760 yd = 1 mi   5,280 ft = 1 mi   60 min = 1 hr

Mode of Transportation	Speed
Bicycle	205.2 yd/min
Running	8 mph
Skateboard	52,800 ft/hr
Scooter	570,240 in./hr

Round your answer to the nearest whole number if needed.

A. bicycle   **B.** running   **C.** skateboard   **D.** scooter

10 mph: **(a)**_____

9 mph: **(b)**_____

8 mph: **(c)**_____

7 mph: **(d)**_____

15. Using the currency conversion chart, determine whether converting your dollars into the various currencies would result in a quantity greater than the dollars you converted. For example, if you convert 10 dollars into Euros, will you get more or less than 10 Euros?

USD	1	0.73	1	1.49	0.26	0.008	1.01	1
Currencies	0.91 EUR	1 AUD	1.39 CAD	1 GBP	1 ILS	1 JPY	1 CHF	1,106 IQD

A. EUR   **B.** AUD   **C.** CAD   **D.** GBP

E. ILS   **F.** JPY   **G.** CHF   **H.** IQD

Less than the quantity of dollars: **(a)**_____

More than the quantity of dollars: **(b)**_____