Name: _____

Units of Measure and Linear Measurements Practice Problems

Lesson 1: The Different Systems of Measurement Practice

1. a) What are the seven different units in the SI system?
   b) What is the purpose of/where is this system used?
   c) What units does the imperial system use for weight?
   d) Where is the Imperial system used?

2. Convert the following metric measurements into the indicated metric units
   a) Convert 47cm into mm
   b) Convert 30m into km
   c) Convert 5mg into dag
   d) Convert 12ML into cL
   e) Convert 1500m into km
   f) Convert 120mg into μg
   g) Convert 13000cm into km
   h) Convert 140hL into dL
   i) Convert 12cm into mm
   j) Convert 1500kg into g

3. Convert the following Imperial measurements into the indicated Imperial units
   a) Convert 1475 inches into yards. 36 inches = 1 yard
   b) Convert 17 pounds into ounces. 1 pound = 16 ounces
   c) Convert 209 quarts into pints. 1 quart = 2 pints
   d) Convert 16 feet into yards. 1 yard = 3 feet
   e) Convert 1200 ounces to stones. 1 stone = 14 pounds, and 1 pound = 16 ounces
   f) Convert 17 gallons into ounces. 1 gallon = 8 pints, and 1 pint = 16 ounces
   g) Convert 12 yards into feet. 1 yard = 3 feet
   h) Convert 145 ounces into pounds. 1 pound = 16 ounces
   i) Convert 4506 ounces into gallons. 1 gallon = 8 pints, and 1 pint = 16 ounces
   j) Convert 680 yards into inches. 36 inches = 1 yard

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4. Jessica is comparing two stores prices for fencing. One store charges $2500 for 200m. Another charges $2500 for 0.15km of fencing. Which store gives the better deal?

5. Matthew is baking 3 different recipes which all call for milk. The first recipe needs 3 cups of milk. The second recipe needs 140 mL of milk. The third recipe needs 3 tsp of milk. How much milk does he need in total. Give your answer in mL. 1 cup = 237 mL. 1 tsp = 5 ml

6. Abdullah grows 10 cm every year. He is now 1.7m tall. How tall was he 3 years ago? Give your final answer in cm

7. While building a new chicken coop, Jeremy needs to measure 14 feet of chicken wire. The only ruler he has is in inches. How many inches of chicken wire should he use? 1 ft = 12 inches

8. While watering my garden I decided to fill 3 separate containers instead of making multiple trips. I used a watering can that holds 5 gallons, a bucket that holds 3 quarts, and a cup that holds $1\frac{1}{2}$ pints. How much water did I use on my garden? Give your answer in gallons. 1 gallon = 8 pints and 4 quarts = 1 gallon

9. Natalie ran 40 yards in 5.5 seconds, Jordan ran 125 feet in 5.5 seconds, and Zoey ran 1400 inches in 5.5 seconds. Who ran the fastest? 1 ft = 12 inches and 1 yard = 3 feet

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Lesson 4: Converting Between Systems Practice

1. Convert the following metric measurements into imperial units
    a) Convert 16km into miles. 1 mile = 1.6km
    b) Convert 145 g into ounces. 28.35 ounces = 1 g
    c) Convert 1.8m into feet. 1 m = 3.28 ft
    d) Convert 230L into gallons. 1 L = 0.26 gallons
    e) Convert 59 cm into inches. 1 in = 2.54 cm

2. Convert the following imperial measurements into metric units
    a) Convert 16 pints into ml. 1 pint = 473.2 ml
    b) Convert 9 yards into m. 1 m = 1.094 yards
    c) Convert 18 pounds into kg. 1 pound = 0.45 kg
    d) Convert 870 inches into cm. 1 in = 2.54 cm
    e) Convert 0.48 stones into kg. 1 stone = 6.35 kg

3. Complete the following conversions, converting to different units in the same system when necessary
    a) Convert 27 yards into cm. 1 m = 1.094 yards
    b) Convert 7609 g into pounds. 1 pound = 0.45 kg
    c) Convert 5340 ml into quarts. 1 ounce = 29.6 ml and 32 ounces = 1 quart
    d) Convert $6 \frac{3}{12}$ feet into cm. 1 m = 3.28 feet
    e) Convert 1200 m into inches. 1 m = 1.094 yards, 1 yard = 3 ft, and 1 ft = 12 inches

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Lesson 5: Situational Problems Practice

1. Beckham is 5'11" and Tanner is 1.9m tall. Who is taller? 1 foot = 12 inches and 1 m = 3.28 ft

2. In America gas costs $2.80 for 1 gallon. In Canada, $2.80 gets you 2.07 L. Which country has better gas prices? 1 L = 0.26 gallons

3. I have 3 ropes measuring 65 inches, 83 cm, and 0.90 m. How much rope do I have in total? Give your final answer in cm. 1 in = 2.54 cm

4. For my recipe I need 25 ounces of oil. I have 3 partially used jugs. The first jug has 400 ml, the second has 4 ounces, and the last one has 0.6 pints. Do I have enough oil? How much extra do I have or how much do I need? 1 pint = 16 ounces and 1 ounce = 29.7 ml

5. I have $10\frac{3}{4}$ yards of fencing and want to cut pieces that are $2\frac{1}{4}$ yard long. How many pieces can I cut?

6. Jacob's coach wants him to run 3 miles but the only track near him is measured in m. The track is 400m and Jacob runs 12 laps. Did he run far enough? 1 mile = 1609 m

7. Emma is hanging a painting that is 1.5m long in the middle of a wall that is 6m long. How much wall space will she have left on either side of the painting? Give your answer in cm

8. I have 2.5 m of rope and need pieces that are 25cm long. How many pieces can I cut?

9. I have 4 pieces of wood measuring 1.8 m, $7\frac{1}{12}$ ft, 76 inches, and 250 cm. I need 10 m of wood. Do I have enough? 1 m = 3.28 ft and 1 ft = 12 inches

10. A large circular pool has a platform in the middle so that it is shaped like a donut. The pool has a diameter of 40 ft and the platform has a diameter of 12 ft. What is the distance from the edge of the platform to the wall of the pool?