

Name:

1.7 Homework: Unit conversion

1 inch = 2.54 centimeters	1 pound = 16 ounces	1 quart = 2 pints
1 meter = 39.37 inches	1 pound = 0.454 kilogram	1 gallon = 4 quarts
1 mile = 5280 feet	1 kilogram = 2.2 pounds	1 gallon = 3.785 liters
1 mile = 1760 yards	1 ton = 2000 pounds	1 liter = 0.264 gallon
1 mile = 1.609 kilometers	1 cup = 8 fluid ounces	1 liter = 1000 cubic centime- ters
1 kilometer = 0.62 mile	1 pint = 2 cups	

1. Use the table above to answer this question, How many...

(a) ounces in a pound

(b) inches in a meter

2. Use your personal knowledge to answer, How many...

(a) inches in a foot

(b) minutes in an hour

3. Required notation: leading variable (capitalized), conversion ratio with units, answer with units.

Example: Find the distance in feet of $D = 4$ miles.

$$D = 4 \text{ miles} \times \frac{5280 \text{ feet}}{1 \text{ mile}} = 21,120 \text{ feet}$$

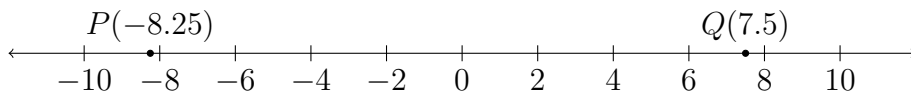
(a) Find the width in centimeters of a screen having $W = 20$ inches.

(b) Find number of minutes in a school day, $T = 6$ hours.

(c) Find the weight in kilograms of a person with weight $W = 120$ pounds.

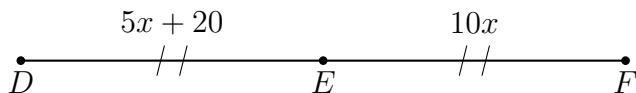
(d) Find the length in feet of a New York City block whose length is $L = \frac{1}{20}$ miles.

4. The points $P(-8.25)$ and $Q(7.5)$ are shown on the number line. Find PQ .



5. The perimeter of an equilateral triangle is 27 inches. Find the length of its sides.

6. Point E bisects \overline{DEF} and $DE = 5x + 20$, $EF = 10x$. Find DF . (show check)



7. Find the perimeter of rectangle $BECA$ given the dimensions as marked, $AB = 8$, $BE = x - 2$, $CE = x$.

