

Grade 6 · Converting Measurement Units · Worksheet Answer Key

Common Core 6.RP.A.3d · mathovore.fr

This answer key shows a full worked solution for each of the 20 unit conversion problems, including the conversion factor used in every step. Compare your factors, your calculations, and the bold final answers with units.

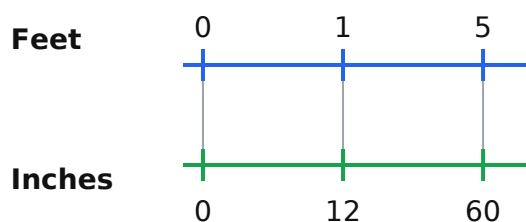
Grade 6 Common Core: 6.RP.A.3d

Problem 1: Feet to inches

Feet to inches: multiply by $\frac{12 \text{ in}}{1 \text{ ft}}$.

$$5 \times 12 = 60.$$

60 inches.



5 feet is 60 inches.

Problem 2: Inches to feet

Inches to feet: divide by 12.

$$84 \div 12 = 7.$$

7 feet.

Problem 3: Pounds to ounces

Multiply by $\frac{16 \text{ oz}}{1 \text{ lb}}$: $4 \times 16 = 64$.

64 ounces.

Problem 4: Yards to feet

Yards to feet: multiply by $\frac{3 \text{ ft}}{1 \text{ yd}}$.

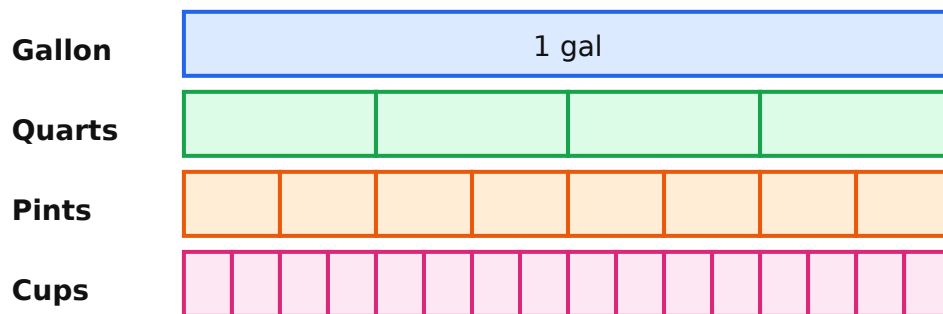
$$8 \times 3 = 24.$$

24 feet.

Problem 5: Gallons to quarts

Multiply by $\frac{4 \text{ qt}}{1 \text{ gal}}$: $3 \times 4 = 12$.

12 quarts.



3 gallons is $3 \times 4 = 12$ quarts.

Problem 6: Quarts to cups

There are 4 cups in 1 quart: multiply by $\frac{4 \text{ c}}{1 \text{ qt}}$.

$$7 \times 4 = 28.$$

Check: 7 quarts is 14 pints, and 14 pints is 28 cups.

28 cups.

Problem 7: Feet to yards

Divide by 3 because 3 feet equal 1 yard: $18 \div 3 = 6$.

6 yards.

Problem 8: Ounces to pounds

Ounces to pounds: divide by 16 because 16 ounces equal 1 pound.

$$96 \div 16 = 6.$$

6 pounds.

Problem 9: Cups, pints, and quarts

Pints: 2 cups equal 1 pint, so $12 \div 2 = 6$ pints.

Quarts: 2 pints equal 1 quart, so $6 \div 2 = 3$ quarts.

6 pints and 3 quarts.

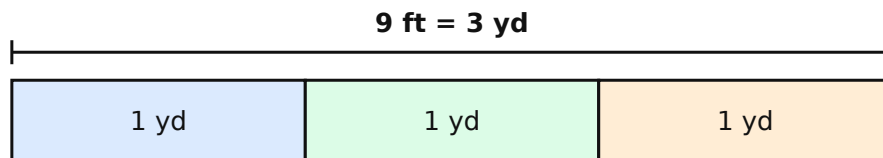
Problem 10: Board in yards

Each piece is 3 feet, which is 1 yard. Three pieces make $3 \times 1 = 3$ yards.

Inches: $9 \times 12 = 108$.

Check: $3 \times 36 = 108$, since 1 yard is 36 inches.

3 yards, or 108 inches.



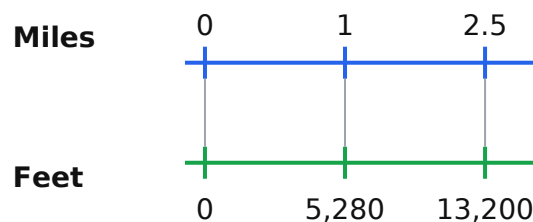
Each 3-foot piece is 1 yard.

Problem 11: Miles to feet

Multiply by $\frac{5,280 \text{ ft}}{1 \text{ mi}}$: $2.5 \times 5,280 = 13,200$.

Check: $2 \times 5,280 = 10,560$ and half a mile is 2,640; $10,560 + 2,640 = 13,200$.

13,200 feet.



2.5 miles is 13,200 feet.

Problem 12: Kilograms and grams

- a. 1 kilogram is 1,000 grams: $2.4 \times 1,000 = 2,400$. **2,400 grams**
- b. $3,500 \div 1,000 = 3.5$. **3.5 kilograms**
- c. $0.6 \times 1,000 = 600$. **600 grams**

Problem 13: Metric lengths

(a) $3.5 \times 1,000 = 3,500$ m.

(b) $450 \div 100 = 4.5$ m.

(a) 3,500 meters. (b) 4.5 meters.

Problem 14: Centimeters, millimeters, meters

- a. 1 centimeter is 10 millimeters: $12.5 \times 10 = 125$. **125 millimeters**
- b. 1 meter is 100 centimeters: $2.3 \times 100 = 230$. **230 centimeters**
- c. 1 meter is 1,000 millimeters: $840 \div 1,000 = 0.84$. **0.84 meter**

Problem 15: Fabric for a costume

The price is per foot, so change yards to feet first: $3.5 \times 3 = 10.5$ feet.

Cost: $10.5 \times \$4 = \$42.0$.

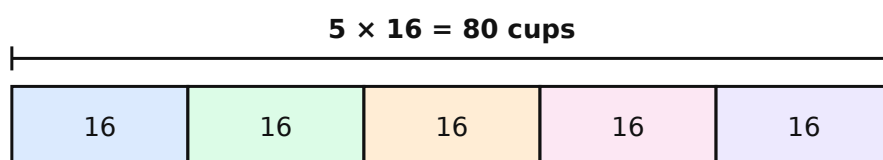
\$42.

Problem 16: Shipping a box

- a. $1.5 + 2.25 + 0.75 = 4.5$. **4.5 pounds**
- b. $4.5 \times 16 = 72$. **72 ounces**
- c. The limit is $5 \times 16 = 80$ ounces. $80 - 72 = 8$. **8 ounces**

Problem 17: Water cooler

- a. 1 gallon is 4 quarts, 1 quart is 2 pints, and 1 pint is 2 cups, so 1 gallon is $4 \times 2 \times 2 = 16$ cups. $5 \times 16 = 80$. **80 cups**
- b. $80 \div 2 = 40$. **40 players**

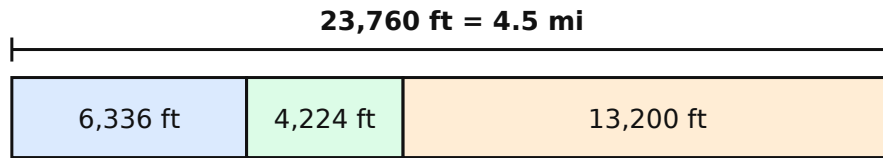


$80 \text{ cups} \div 2 \text{ cups per player} = 40 \text{ players}$

80 cups serve 40 players.

Problem 18: Walk to school

- a. $1.2 + 0.8 + 2.5 = 4.5$. **4.5 miles**
b. $4.5 \times 5,280 = 23,760$. Check by legs: $6,336 + 4,224 + 13,200 = 23,760$. **23,760 feet**
c. $23,760 \div 3 = 7,920$. **7,920 yards**



Home to Library, Library to Park, Park to School

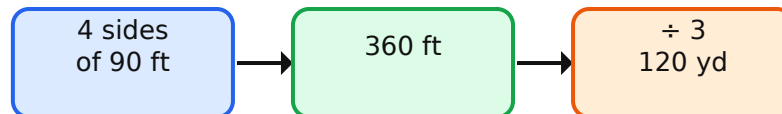
Each leg in feet; the total is 23,760 feet.

Problem 19: Base paths

Distance: $4 \times 90 = 360$ feet.

Yards: $360 \div 3 = 120$.

360 feet, or 120 yards.



360 feet is 120 yards.

Problem 20: Hiking trail

Trail length in feet: $2 \times 5,280 = 10,560$.

Left: $10,560 - 6,600 = 3,960$ feet.

In miles: $3,960 \div 5,280 = 0.75$.

3,960 feet, which is 0.75 mile.