Convert Measurements with Whole Numbers

M4 L20

Notes on measurement conversion can also be found in your ISN on pages: _____

1. $\frac{3}{10}$ meters = 30 centimeters

$= \frac{3}{10} \times (1 \text{ meter})$

$= \frac{3}{10} \times (100 \text{ cm})$

$= \frac{3 \times 100}{10}$

$= \frac{300}{10} = 30 \text{ cm}$

2. $\frac{3}{4}$ feet = 9 inches

$= \frac{3}{4} \times 1 \text{ ft}$

$= \frac{3}{4} \times 12 \text{ inches}$

$= \frac{3 \times 12}{4} \text{ in}$

$= \frac{36}{4} \text{ in} = 9 \text{ in}$

3. Susan buys half of a yard of rope to finish a project. How many inches of rope did she buy? If a whole yard costs $12, how much did Susan pay?

TS: Susan bought 18 inches of rope and paid $6.

$\frac{1}{2}$ yd = ___ in

$= \frac{1}{2} \times 1 \text{ yd}$

$= \frac{1}{2} \times 36 \text{ in}$

$= \frac{36}{2} \text{ in}$

$= 18 \text{ in}$

$\frac{1}{2} \times 12 = \$6$

4. Michael purchased 3-fourths of a pound of paint for his art project. His sister purchased 7-sixteenths of a pound of paint. How many ounces of paint did they buy altogether? Express your answer as a mixed number.

TS: They bought 19 oz of paint altogether.

$\left(\frac{3}{4} \times 16 \text{ oz}\right) + \left(\frac{7}{16} \times 16 \text{ oz}\right)$

$\frac{3 \times 4}{4_1} + \frac{7 \times 16_1}{16_1} = 12 + 7 = 19$

Convert Mixed Unit Measurements

M4 L20

Notes on measurement conversion can also be found in your ISN on pages: _____

5. $4\frac{1}{3}$ yards = 13 ft

$= 4\frac{1}{3} \times (1\text{yd})$

Change to an improper fraction → $= 4\frac{1}{3} \times (3\text{ft})$

$= \frac{13}{3} \times 3\text{ft}$

$= \frac{13 \times 3^{1}}{3_{1}} = 13\text{ft}$

6. $2\frac{13}{16}$ gallons = $22\frac{1}{2}$ pints

$= 2\frac{13}{16} \times (1\text{g})$

$= 2\frac{13}{16} \times (8\text{pints})$

$= \frac{45}{16} \times 8\text{pints}$

$= \frac{45 \times \cancel{8}^{1}}{\cancel{16}_{2}} = \frac{45}{2} = 22\frac{1}{2}\text{pints}$

7. A container can hold 4 and a half pints of water. How many cups of water can 2 containers hold?

TS: Two containers holds 18 cups.

$4\frac{1}{2} \times 2 = 9$

$= 9\text{pints} = \_\_\_\text{cups}$

$= 9 \times 1\text{pint}$

$= 9 \times 2\text{cups}$

$= 18\text{cups}$

8. James bought 9 and 1-fourth yards of lumber. He already has 2-thirds of that amount at home. How many total feet of lumber does James own?

TS: James has $15\frac{5}{12}$ total feet of lumber.

$9\frac{1}{4} \times \frac{2}{3}$

$= \frac{37}{4} \times \frac{2}{3}$

$= \frac{37 \times \cancel{2}^{1}}{\cancel{4}_{2} \times 3} = \frac{37}{6} = 6\frac{1}{6}$ at home

at home bought

$6\frac{1}{6} + 9\frac{1}{4}$

$= 6 + 9 + \frac{1}{6} + \frac{1}{4}$

$= 15 + \frac{2}{12} + \frac{3}{12}$

$= 15\frac{5}{12}$

Glue Tab