

Solutions to Worksheet #1

1. 30' (feet)
2. $24\text{ft} + 8\text{ft} = 32\text{ft}$
3. 43 bars
4. 1.94mi
5. 1.32ft
6. 125.4 L
7. 1700 tons

Solutions to Worksheet #2

1. Step 1: $23\text{lbs} / 100\text{gal}$ (original amounts) = **.23** (ratio)
Step 2: New salt? = $500\text{gals} \times .23 = \underline{\mathbf{115\text{lbs}}}$
2. Step 1: 30lbs (fine) to 60lbs (coarse)
Step 2: $30\text{lbs}/60\text{lbs} = \underline{\mathbf{.50}}$ OR 1lb : 2lbs
$$\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = (3 + 2) / 6$$
$$= \underline{\mathbf{5/6 \text{ of a drum}}}$$
4. $3/8\text{lbs} - 1/4\text{lbs} = 3/8\text{lbs} - 2/8$ lbs = $1/8\text{lbs}$,
remove 1/8lbs aggregate
5. $1/3(\text{sheet/diaphragm}) \times 6(\text{diaphragms}) = 1/3 \times 6/1$
 $= 6/3 = \underline{\mathbf{2 \text{ sheets of plywood}}}$
6. $7/8 \text{ ton} \div 1/16 \text{ ton}$
 $7/8 \text{ ton} \times 16/1 \text{ ton} = \underline{\mathbf{14}}$

Solutions to Worksheet #3

1. Step 1: $2\text{in}/12\text{in} = .167\text{ft}$ (converting 2 inches to feet)
Step 2: $4\text{miles} \times 5280\text{ft} = 21,120\text{ft}$ (mile to feet)
Step 3: $.167\text{ft} \times 21,120\text{ft} \times 24\text{ft} = 84,648.96\text{ft}^3$
Step 4: $84,648.96\text{ft}^3/27\text{ft}^3 = \underline{\mathbf{3,135.15\text{yd}^3}}$
2. $4000\text{lbs} \times 2.2 \text{ yd}^3 = \mathbf{8800\text{lbs}}$ or 4.4 tons
3. $95\text{lbs} \times 240\text{ft}^3 = \mathbf{22,800\text{lbs}}$ or 11.4 tons

Solutions to Worksheet #4

1. 35.29 ft
2. 76.38ft
3. 11ft

Solutions to Worksheet #5

1. $3\text{ft} + 4\text{ft} + 5\text{ft} + 6\text{ft} = 18\text{ft}$.
2. $3\text{in} + 4\text{in} + 5\text{in} = 12\text{in}$

Solutions to Worksheet #6

1. $2 \times 3.14 \times 4.5\text{in} = 28.26\text{in}$
2. $3.14 \times 18\text{in} = 56.52\text{in}$

Solutions to Worksheet #7

1. $4\text{yd} \times 7\text{yd} = 28 \text{ yd}^2$
2. This is a 3-step problem. Separate the shape into 2 rectangles, then solve.

Step 1: (Area of 1st rectangle) $7\text{ft} \times 11\text{ft} = 77\text{ft}^2$

Step 2: (Area of 2nd rectangle) $3\text{ft} \times 5\text{ft} = 15\text{ft}^2$

Step 3: (Add the 2 Areas together)

$$77\text{ft}^2 + 15\text{ft}^2 = \underline{92\text{ft}^2}$$

3. $\frac{1}{2} \times 124.0\text{ft} \times 93.5\text{ft} = \mathbf{5797.0\text{ft}^2}$
4. $\frac{1}{2} \times 75\text{ft} \times 60\text{ft} = \mathbf{2250\text{ft}^2}$
5. $3.14 \times (250\text{ft} \times 250\text{ft}) = \underline{\mathbf{196,250\text{ft}^2}}$
6. $3.14 \times (7\text{ft} \times 7\text{ft}) = \underline{\mathbf{153.86\text{ft}^2}}$
7. $\frac{1}{2} (3\text{ft} + 6\text{ft}) \times 4\text{ft} = \underline{\mathbf{18\text{ft}^2}}$
8. $\frac{1}{2} (10\text{ft} + 24\text{ft}) \times 7\text{ft} = \underline{\mathbf{119\text{ft}^2}}$

Solutions to Worksheet #8

1. $14\text{in} \times 19\text{in} \times 11\text{in} = \underline{\mathbf{2,926\text{in}^3}}$
2. $65\text{ft} \times 6\text{ft} \times 8\text{ft} = \underline{\mathbf{3120\text{ft}^3}}$
3. $(3.14 \times 4.9\text{ft}^2) \times 7.8\text{ft} = \underline{\mathbf{588.05\text{ft}^3}}$
4. $(3.14 \times 12\text{in}^2) \times 34\text{in} = \underline{\mathbf{15,373.44\text{in}^3}}$