

Air Fuel Ratio Quiz

Name KEY

Use the following ratio for your air fuel ratio:

$$\frac{1380 \text{ ft}^3}{1 \text{ gallon of gasoline}}$$

1) How many gallons of gas will 23,805 ft³ burn completely?

$$\frac{1380 \text{ ft}^3}{1 \text{ gallon}} = \frac{23,805 \text{ ft}^3}{x \text{ gallons}}$$

$$\frac{23,805(1)}{1380} = \frac{1380(x)}{1380}$$

$$17.25 = x$$

$$\boxed{17.25 \text{ gallons}}$$

2) How many cubic feet of air is needed to burn 16.25 gallons of gas?

$$\frac{1380 \text{ ft}^3}{1 \text{ gal}} = \frac{x \text{ ft}^3}{16.25 \text{ gallons}}$$

$$x = (1380)(16.25)$$

$$\boxed{x = 22,425 \text{ ft}^3}$$

3) How many cubic feet of air is needed to burn $\frac{1}{2}$ gallon of gas?

$$\frac{1380 \text{ ft}^3}{1 \text{ gal}} = \frac{x \text{ ft}^3}{\frac{1}{2} \text{ gal}}$$

$$x = (1380)(\frac{1}{2})$$

$$\boxed{x = 690 \text{ ft}^3}$$

4) How many gallons of gas will 46,368 ft³ burn completely?

$$\frac{1380 \text{ ft}^3}{1 \text{ gal}} = \frac{46,368 \text{ ft}^3}{x \text{ gallons}}$$

$$\frac{1380(x)}{1380} = \frac{46,368}{1380}$$

$$\boxed{x = 33.6 \text{ gallons}}$$

5) 3 out of 17 elementary and middle school teachers are men. If Alpena has 137 elementary and middle school teachers, how many of these are men?

$$\frac{3}{17} = \frac{x}{137}$$

$$(3)(137) = 17(x)$$

$$\frac{411}{17} = \frac{17x}{17}$$

$$24.18 = x$$

$$\boxed{\text{About } 24}$$