

2.26 Ratios & proportions

Solutions

$$1. 300 \text{ sunfish} \times \frac{3 \text{ perch}}{4 \text{ sunfish}} = 225 \text{ perch}$$

$$2. 17 \text{ ft}_{\text{High}} \times \frac{3 \text{ ft deep}}{5 \text{ ft high}} = 10.2 \text{ ft deep}$$

$$3. 34 \text{ in}_{\text{Jan}} \times \frac{5 \text{ inches total}}{3 \text{ in Jan}} = 56\frac{2}{3} \text{ in}$$

$$4. \begin{array}{l} 60 \text{ minutes} \\ (1 \text{ hour}) \end{array} \times \frac{3 \text{ stations}}{10 \text{ minutes}} = 18 \text{ stations}$$

$$5. 40,000 \text{ pop} \times \frac{624 \text{ votes}}{1100 \text{ voters}} = 22,650.9... \text{ votes} \approx 22,700$$

$$6. 10 \text{ days} \times \frac{5 \text{ pairs}}{7 \text{ days}} = 7\frac{1}{7} \text{ pairs}$$

$$7. 28 \text{ ww} \times \frac{5 \text{ Vampires}}{2 \text{ wwolves}} = 70 \text{ vampires}$$

$$8. 45 \text{ total} \times \frac{4 \text{ sunflowers}}{4+5 \text{ total flowers}} = 20 \text{ sunflowers}$$

$$9. \$280 \times \frac{1 \text{ €}}{1.08} = 231.48 \text{ €}$$

$$10. \begin{array}{l} 18'' = x \cdot 1.125 \\ y \cdot 1.125 = 22.5 \end{array} \quad \begin{array}{l} x = 16 \\ y = 20 \end{array}$$

2.26 Ratios

Solutions

11. $\frac{x+30}{x} = \frac{6}{5}$ $x = \# \text{ yellow balls}$

$$5(x+30) = 6x$$

$$x = \cancel{20}, 50$$

$$\frac{180}{150} = \frac{6}{5} \checkmark$$

300 balls in total

12. 1 plane 5 hours $\times \frac{\frac{1}{2} \text{ acre}}{25 \text{ minutes}} \times \left(\frac{60 \text{ min}}{1 \text{ hour}} \right) = 6 \text{ acres}$

$$A = 8 \times 0.75 + 12 \times 1.5 = 24 \text{ acres}$$

4 planes (24 ÷ 6)

13. males = $250 \times 68\% = 170$ males

new total = $170 \times 1.3 = 221$ total

cancellations = $250 - 221 = 29$ female

Cancellations

14. additional cheese = $n \text{ people} \times \frac{c \text{ lbs}}{m \text{ people}} = \frac{nc}{m} \text{ lbs}$

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