

$$\begin{aligned}
 1) \quad & 37.5\% \\
 &= \frac{37.5}{100} \\
 &= \frac{375}{1000} \\
 &= \frac{15}{40} \\
 &= \frac{3}{8}
 \end{aligned}$$

$$\begin{aligned}
 2) \quad & 4\frac{5}{8}\% \\
 &= \frac{4\frac{5}{8}}{100} = \frac{\frac{37}{8}}{100} \cdot \frac{8}{8} \\
 &= \frac{37}{800}
 \end{aligned}$$

$$\begin{aligned}
 3) \quad & \frac{5}{m} - \frac{k}{3} \\
 &= \frac{15}{3m} - \frac{km}{3m} \\
 &= \frac{15 - km}{3m}
 \end{aligned}$$

$$\begin{aligned}
 4) \quad & \text{Brand X: } 12 \text{ oz for } \$4.56 \\
 & \text{Unit price/cost} = \frac{\$4.56}{12 \text{ oz}} \\
 &= \$0.38/\text{oz}
 \end{aligned}$$

$$\begin{aligned}
 & \text{Brand Y: } 16 \text{ oz for } \$6.24 \\
 & \text{Unit price/cost} = \frac{\$6.24}{16 \text{ oz}} \\
 &= \$0.39/\text{oz}
 \end{aligned}$$

Brand X is cheaper in cost per unit

$$5) \quad \text{Pay rate} = \frac{\$64.22}{13 \text{ hr}} = \$4.94/\text{hr}$$

$$6) \quad \frac{18}{17x} - \frac{8}{17x} = \frac{10}{17x} \quad (1)$$

$$\begin{aligned}
 7) \quad & 18\frac{2}{7} - 8\frac{6}{7} \\
 &= 17\frac{9}{7} - 8\frac{6}{7} \\
 &= 9\frac{3}{7}
 \end{aligned}$$

WLAC
Math 112
Dept Final
Solution sp13

$$\begin{aligned}
 8) \quad & -\frac{14}{3} + 4 \\
 &= -\frac{14}{3} + \frac{12}{3} \\
 &= -\frac{2}{3}
 \end{aligned}$$

$$\begin{aligned}
 9) \quad & 9\frac{2}{5} + 18\frac{1}{3} \\
 &= 9\frac{6}{15} + 18\frac{5}{15} \\
 &= 27\frac{11}{15}
 \end{aligned}$$

$$\begin{aligned}
 10) \quad & \frac{6}{8} + \frac{2}{14} + \frac{6}{15} \\
 &= \frac{3}{4} + \frac{1}{7} + \frac{2}{5} \\
 &= \frac{105}{140} + \frac{20}{140} + \frac{56}{140} \\
 &= \frac{181}{140} \\
 &= 1\frac{41}{140}
 \end{aligned}$$

$$\begin{aligned}
 11) \quad & -7.720 + (-3.035) \\
 &= -10.755
 \end{aligned}$$

$$\begin{aligned}
 12) \quad & V = 3 \text{ cm} \times 4 \text{ cm} \times 6 \text{ cm} \\
 &= 72 \text{ cm}^3
 \end{aligned}$$

$$13) 51.9\% = \frac{51.9}{100} = 0.519$$

$$14) -36.68 = 7.7x + 4.9$$

$$-36.68 - 4.9 = 7.7x$$

$$-41.58 = 7.7x$$

$$\frac{-41.58}{7.7} = x$$

$$-5.40767 = x$$

$$-5.40767 = x$$

$$15) -6 + 10y + 18 = 4(2y - 6) - 8$$

$$10y + 12 = 8y - 24 - 8$$

$$10y + 12 = 8y - 32$$

$$10y + 12 - 8y = -32$$

$$2y + 12 = -32$$

$$2y = -32 - 12$$

$$2y = -44$$

$$y = \frac{-44}{2}$$

$$y = -22$$

$$16) -19d = 0$$

$$d = \frac{0}{-19}$$

$$d = 0$$

$$17) 50\% \text{ of pitches are strikes}$$

$$50\% \cdot x = 44$$

$$\frac{1}{2} x = 44$$

$$x = 44 \left(\frac{2}{1} \right)$$

$$x = 88$$

$$18) \text{ Data: } 6, 10, 18, \underset{\substack{\uparrow \\ \text{median}}}{21}, 30, 36, 48$$

$$19) \text{ Data: } \$16K, \$30K, \$49K, \$15K, \$29K$$

$$\text{Sum} = \$139K$$

$$\text{Mean} = \frac{\$139000}{5} = \$27800$$

$$20) P = 3\frac{4}{5} + 2\frac{1}{5} + 3\frac{4}{5} + 2\frac{1}{5} \text{ ft}$$

$$P = 10\frac{10}{5} \text{ ft}$$

$$P = (10 + 2) \text{ ft}$$

$$P = 12 \text{ ft}$$

$$21) \frac{5}{6} \div \frac{4}{5} \left(\frac{3}{10} - \frac{1}{2} \right)$$

$$= \frac{5}{6} \div \frac{4}{5} \left(\frac{3}{10} - \frac{5}{10} \right)$$

$$= \frac{5}{6} \div \frac{4}{5} \left(-\frac{2}{10} \right)$$

$$= \frac{5}{6} \div \frac{4}{5} \left(-\frac{1}{5} \right)$$

$$= \frac{5}{6} \cdot \frac{5}{4} \left(-\frac{1}{5} \right)$$

$$= \frac{25}{24} \left(-\frac{1}{5} \right)$$

$$= -\frac{5}{24}$$

$$22) \text{ Play} = 7$$

$$\text{win} = 2$$

$$\frac{\text{win}}{\text{play}} = \frac{2}{7}$$

$$23) \text{ Price} = \$760$$

$$\text{Tax} = 9\frac{1}{2}\% \times \$760$$

$$= 9.5\% \times \$760$$

$$= 0.095 \times \$760$$

$$= \$72.20$$

$$\text{Total} = \$760 + \$72.20$$

$$= \$832.20$$

$$24) 2 + 5(4w + 2) - w$$

$$= 2 + 20w + 10 - w$$

$$= 19w + 12$$

$$25) n + 7 = 12$$

$$n = 12 - 7$$

$$n = 5$$

$$\begin{aligned}
 26) \quad & -3 + (-21) + (-5) + (-9) \\
 & = -24 + (-5) + (-9) \\
 & = -29 + (-9) \\
 & = -38
 \end{aligned}$$

$$\begin{aligned}
 27) \quad & \frac{x}{28} = \frac{-1}{14} \\
 \text{CM} \Rightarrow & 14 \cdot x = -1 \cdot 28 \\
 & 14x = -28 \\
 & x = \frac{-28}{14} \\
 & x = -2
 \end{aligned}$$

$$\begin{aligned}
 28) \quad & \frac{3}{5} \cdot \frac{6}{7} \cdot \frac{1}{3} \\
 & = \frac{18}{35} \cdot \frac{1}{3} \\
 & = \frac{6}{35}
 \end{aligned}$$

$$\begin{aligned}
 29) \quad & 115\% \text{ of what number} \\
 & \text{is 41?} \\
 & \frac{115}{100} = \frac{41}{w}
 \end{aligned}$$

$$\begin{aligned}
 30) \quad & \frac{11}{15} \\
 & 15 \overline{) 11.0} \\
 & \quad \underline{105} \\
 & \quad \quad 50 \\
 & \quad \quad \underline{45} \\
 & \quad \quad \quad 50
 \end{aligned}$$

$$\begin{aligned}
 31) \quad & \text{Each person's share} \\
 & = \frac{\$88.17}{4 \text{ people}} \\
 & = \$22.0425/\text{person} \\
 & \approx \$22.04/\text{person}
 \end{aligned}$$

$$\begin{aligned}
 32) \quad & 3.7 - 2x = -11.3 \\
 & -2x = -11.3 - 3.7 \\
 & -2x = -15 \\
 & x = \frac{-15}{-2} \\
 & x = 7.5
 \end{aligned}$$

$$\begin{aligned}
 33) \quad & y + \frac{8}{9} = \frac{1}{9} \quad (3) \\
 & y = \frac{1}{9} - \frac{8}{9} \\
 & y = -\frac{7}{9}
 \end{aligned}$$

$$\begin{aligned}
 34) \quad & \frac{7x+2}{2y} ; \quad x=4, y=-5 \\
 \Rightarrow & \frac{7(4)+2}{2(-5)} = \frac{28+2}{-10} = \frac{30}{-10} = -3
 \end{aligned}$$

$$\begin{aligned}
 35) \quad & -\frac{3}{4}x = -21 \\
 & x = -21 \left(-\frac{4}{3}\right) \\
 & x = 28
 \end{aligned}$$

$$\begin{aligned}
 36) \quad & 3p - 13 = 2p - 15 \\
 & 3p - 13 - 2p = -15 \\
 & p - 13 = -15 \\
 & p = -15 + 13 \\
 & p = -2
 \end{aligned}$$

$$\begin{aligned}
 37) \quad & -6^2 - 7^2 \\
 & = -36 - 49 \\
 & = -85
 \end{aligned}$$

$$\begin{aligned}
 38) \quad & \frac{5}{9}n = \frac{1}{9}n + \frac{2}{3} \\
 & \quad \quad \quad \times 9 \\
 & 5n = n + 6 \\
 & 5n - n = 6 \\
 & 4n = 6 \\
 & n = \frac{6}{4} \\
 & n = \frac{3}{2}
 \end{aligned}$$

$$39) \quad 8(x+7)$$

$$\begin{aligned}
 40) \quad & A(-1, 0) \\
 & B(4, -4)
 \end{aligned}$$