

9.1 Homework # 19-32 all

$$19. \quad \frac{16}{12} = \frac{12}{x} \quad 16x = 144$$

$$x = 9$$

$$20. \quad \frac{20}{x} = \frac{25}{20} \quad 25x = 400$$

$$x = 16$$

$$21. \quad \frac{32}{15} = \frac{x}{32} \quad 15x = 1024$$

$$x = 68.3$$

$$22. \quad \frac{40}{32} = \frac{x}{40} \quad 32x = 1600$$

$$x = 50$$

$$23. \quad \frac{4}{x} = \frac{x}{4} \quad x^2 = 16$$

$$x = 4$$

$$24. \quad \frac{7}{x} = \frac{x}{18} \quad x^2 = 126 \quad x = 3\sqrt{14}$$

$$x = 11.2$$

$$25. \quad \frac{3}{x} = \frac{x}{9} \quad x^2 = 27 \quad x = 5.2$$

$$x = 3\sqrt{3}$$

$$26. \quad \frac{12}{y} = \frac{20}{12} \quad 20y = 144 \quad \frac{7.2}{x} = \frac{x}{12.8} \quad x^2 = 92.16$$

$$y = 7.2$$

$$x = 9.6$$

$$27. \quad \frac{7}{5} = \frac{5}{m-7} \quad 25 = 7(m-7) \quad 7m = 74$$

$$25 = 7m - 49$$

$$m = 10.6$$

$$28. \quad \frac{14}{c} = \frac{16}{14} \quad 16c = 196 \quad d = 16 - 12.25 \quad \frac{12.25}{e} = \frac{e}{3.75}$$

$$c = 12.25$$

$$d = 3.75$$

$$e^2 = 49.9375$$

$$29. \quad \frac{x}{32} = \frac{32}{24} \quad 24x = 1024 \quad \frac{z}{42.7} = \frac{66.8}{z} \quad z^2 = 2844.4$$

$$x = 42.7 \quad z = 53.3$$

$$\frac{y}{24} = \frac{66.8}{y} \quad y^2 = 1600$$

$$y = 40$$

$$30. \quad \frac{8}{x+9} = \frac{x+9}{18} \quad (x+9)(x+9) = 144$$

$$x^2 + 18x + 81 = 144$$

$$x^2 + 18x - 63 = 0$$

$$(x+21)(x-3) = 0$$

$$x = -21 \quad x = 3$$

$$x = 3$$

$$31. \quad \frac{44.8}{x} = \frac{72}{84.8} \quad 72x = 3799.04 \quad BD = 123.3$$

$$x = 61.63$$

$$32. \quad \frac{5.5}{18} = \frac{18}{h-5.5} \quad 5.5(h-5.5) = 324$$

$$5.5h - 30.25 = 324$$

$$5.5h = 354.25$$

$$h = 64.4 \text{ ft}$$

$$\frac{5.5}{18} = \frac{18}{x}$$

$$5.5x = 324$$

$$x = 58.9$$

$$\begin{array}{r} 58.9 \\ + 5.5 \\ \hline 64.4 \text{ ft} \end{array}$$