

section 2.3

2.3 1

$$166) \frac{C}{d} = \frac{\pi d}{d} \text{ for } \pi$$

$$\underline{\underline{\frac{C}{d} = \pi}}$$

$$168) \frac{V}{LW} = \frac{LWH}{LW} \text{ for } H$$

$$\underline{\underline{\frac{V}{LW} = H}}$$

$$170) A = \frac{1}{2} b h \text{ for } h$$

$$2(A) = 2\left(\frac{1}{2} b h\right)$$

$$\frac{2A}{b} = \frac{b h}{b}$$

$$\underline{\underline{\frac{2A}{b} = h}}$$

$$172) A = \frac{1}{2} d_1 d_2 \text{ for } d_2$$

$$2(A) = 2\left(\frac{1}{2} d_1 d_2\right)$$

$$\frac{2A}{d_1} = \frac{d_1 d_2}{d_1}$$

$$\underline{\underline{\frac{2A}{d_1} = d_2}}$$

$$174) A = \frac{1}{2} h (b_1 + b_2) \text{ for } b_2$$

$$A = \frac{h}{2} (b_1 + b_2)$$

$$\frac{2}{h}(A) = \frac{2}{h} \left(\frac{h}{2} (b_1 + b_2) \right)$$

$$\frac{2A}{h} = b_1 + b_2$$

$$-b_1, -b_1$$

$$\underline{\underline{\frac{2A}{h} - b_1 = b_2}}$$

$$176) h = 48t + \frac{1}{2} a t^2 \text{ for } a$$

$$-48t - 48t$$

$$h - 48t = \frac{t^2}{2} a$$

$$\left(\frac{2}{t^2}\right)(h - 48t) = \left(\frac{t^2}{2} a\right) \left(\frac{2}{t^2}\right)$$

$$\underline{\underline{\frac{2(h - 48t)}{t^2} = a}}$$

$$178) \begin{array}{r} 180 = a + b + c \text{ for } c \\ -a - b \quad -a - b \\ \hline \end{array}$$

$$\underline{\underline{180 - a - b = c}}$$

$$182) P = 2L + 2W \text{ for } W$$

$$\begin{array}{r} -2L \quad -2L \\ \hline P - 2L = 2W \\ \hline \end{array}$$

$$\underline{\underline{\frac{P - 2L}{2} = W}}$$

$$184) 9x + y = 13$$

$$\begin{array}{r} -9x \quad -9x \\ \hline \end{array}$$

$$\underline{\underline{y = -9x + 13}}$$

$$188) x - y = -3$$

$$\begin{array}{r} +3 + y \quad +3 + y \\ \hline \end{array}$$

$$\underline{\underline{x + 3 = y}}$$

2.3 2

$$180) A = \frac{1}{2}pl + B \text{ for } l$$

$$\begin{array}{r} -B \quad -B \\ \hline A - B = \frac{p}{2}l \end{array}$$

$$\left(\frac{2}{p}\right)(A - B) = \left(\frac{p}{2}l\right)\left(\frac{2}{p}\right)$$

$$\underline{\underline{\frac{2(A - B)}{p} = l}}$$

$$186) -5x + y = -1$$

$$\begin{array}{r} +5x \quad +5x \\ \hline \end{array}$$

$$\underline{\underline{y = 5x - 1}}$$

$$190) 3x + 2y = 11$$

$$\begin{array}{r} -3x \quad -3x \\ \hline \end{array}$$

$$\frac{2y}{2} = \frac{-3x + 11}{2}$$

$$\underline{\underline{y = -\frac{3}{2}x + \frac{11}{2}}}$$

192) $5x + 2y = 10$

$$\begin{array}{r} -5x \qquad -5x \\ \hline \end{array}$$

$$\frac{2y}{2} = \frac{-5x + 10}{2}$$

$$y = \frac{-5}{2}x + \frac{10}{2}$$

$$\underline{\underline{y = -\frac{5}{2}x + 5}}$$

194) $4x - 3y = 12$

$$\begin{array}{r} -12 + 3y \quad -12 + 3y \\ \hline \end{array}$$

$$\frac{4x - 12}{3} = \frac{3y}{3}$$

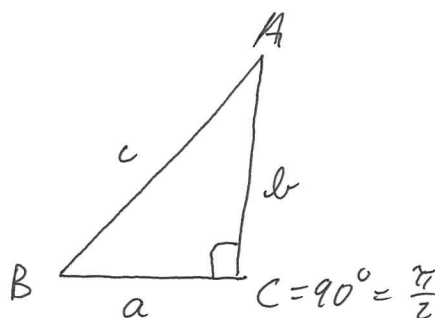
$$\frac{4}{3}x - \frac{12}{3} = y$$

$$\underline{\underline{\frac{4}{3}x - 4 = y}}$$

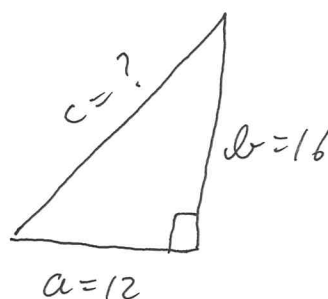
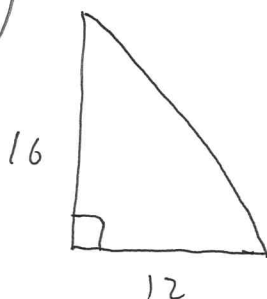
exercises 195 - 202 skipped

Pythagorean
Theorem

$$a^2 + b^2 = c^2$$



204)



$$c^2 = (12)^2 + (16)^2$$

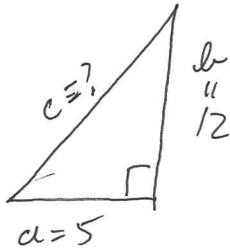
$$c^2 = 144 + 256$$

$$c^2 = 400$$

$$c = \pm \sqrt{400} = \pm 20$$

$$\underline{\underline{c = +20}}$$

206)



$$c^2 = (5)^2 + (12)^2$$

$$c^2 = 25 + 144$$

$$c^2 = 169$$

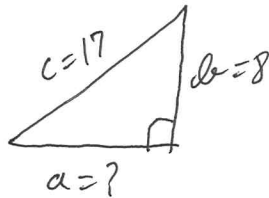
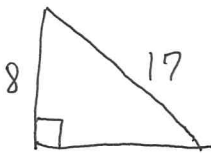
$$c = \pm \sqrt{169} = \pm 13$$

$$\underline{\underline{c = +13}}$$

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for exercises 207-214, use exact answers (non calculator)

208)



$$a^2 + (8)^2 = (17)^2$$

$$a^2 + 64 = 289$$

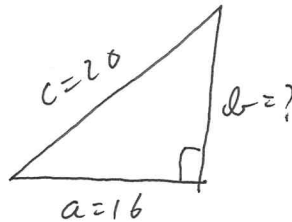
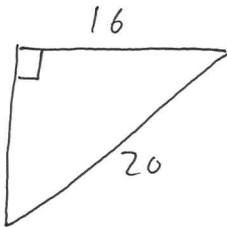
$$\begin{array}{r} a^2 + 64 = 289 \\ -64 \quad -64 \\ \hline \end{array}$$

$$a^2 = 225$$

$$a = \pm \sqrt{225} = \pm 15$$

$$\underline{\underline{a = +15}}$$

210)



$$(16)^2 + b^2 = (20)^2$$

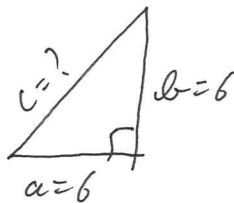
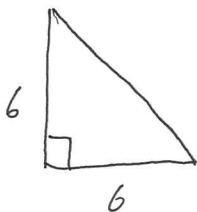
$$256 + b^2 = 400$$

$$b^2 = 144$$

$$b = \pm \sqrt{144} = \pm 12$$

$$\underline{\underline{b = +12}}$$

212)



$$c^2 = (6)^2 + (6)^2$$

$$c^2 = 36 + 36$$

$$c^2 = 72$$

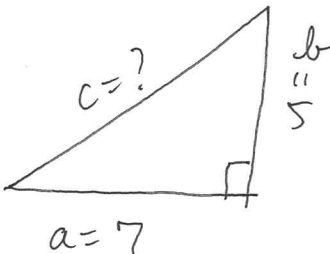
$$c = \pm \sqrt{72}$$

$$\underline{\underline{c = +\sqrt{72}}} = +\sqrt{(36)(2)}$$

$$= \sqrt{36} \sqrt{2}$$

$$= \underline{\underline{6\sqrt{2}}}$$

214)



$$c^2 = (7)^2 + (5)^2$$

$$c^2 = 49 + 25$$

$$c^2 = 74$$

$$c = \pm \sqrt{74}$$

$$\underline{\underline{c = +\sqrt{74}}}$$