

Chap 9 D1

Chap 9 p 468 #3-10, 21-27 odd

$$\textcircled{3} \quad 7^2 + 11^2 = x^2$$

$$49 + 121 = x^2$$

$$170 = x^2$$

$$x = 13.04$$

Not Triple

$$\textcircled{4} \quad 16^2 + 30^2 = x^2$$

$$256 + 900 = x^2$$

$$x^2 = 1156$$

$$x = 34$$

yes TRIPLE

$$\textcircled{5} \quad 9^2 + 40^2 = x^2$$

$$81 + 1600 = x^2$$

$$x = 41$$

yes
Triple

$$\textcircled{6} \quad 4^2 + 6^2 = x^2$$

$$16 + 36 = x^2$$

$$x = 7.2$$

not triple

$$\textcircled{7} \quad 8^2 + x^2 = 17^2$$

$$64 + x^2 = 289$$

$$x^2 = 225$$

$$x = 15$$

yes TRIPLE

$$\textcircled{8} \quad x^2 + 9^2 = 24^2$$

$$x^2 + 81 = 576$$

$$x^2 = 495$$

$$x = 22.25$$

NOT triple

$$\textcircled{9} \quad x^2 + 48^2 = 50^2$$

$$x^2 + 2304 = 2500$$

$$x^2 = 196$$

$$x = 14$$

yes triple

$$\textcircled{10} \quad 7^2 + x^2 = 9^2$$

$$49 + x^2 = 81$$

$$x^2 = 32$$

$$x = 5.66$$

yes
triple

$$\textcircled{21} \quad 10^2 + 11^2 \quad \square \quad 14^2$$

$$100 + 121 \quad \square \quad 196$$

$$221 > 196$$

acute

$$\textcircled{23} \quad 12^2 + 16^2 \quad \square \quad 20^2$$

$$144 + 256 \quad \square \quad 400$$

$$\text{RIGHT} \quad 400 = 400$$

$$\textcircled{25} \quad (5.3)^2 + (6.7)^2 \quad \square \quad (7.8)^2$$

$$2809 + 44.89 \quad \square \quad 60.84$$

$$\text{Acute} \quad 72.98 > 60.84$$

$$\textcircled{27} \quad 24^2 + 30^2 \quad \square \quad 6\sqrt{4}$$

$$576 + 900 \quad \square \quad 1548$$

$$1476 < 1548$$

OBTUSE

$$a^2 + b^2 < c^2 \quad \text{obtuse}$$

$$a^2 + b^2 > c^2 \quad \text{acute}$$

D2 p 475 # 3-6, 7-10

(3) $x = 7\sqrt{2}$

(4) $x = 5\sqrt{2} \cdot \sqrt{2}$
 $= 5\sqrt{4} = \boxed{10}$

(5) $x = 3$

(6) $x\sqrt{2} = 9$
 $x = \frac{9}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \boxed{\frac{9\sqrt{2}}{2}}$

(7) $x = 9\sqrt{3}$
 $y = 18$

(8) $x = 3$

$y = 6$

(9) $y = 12$

$x = 12\sqrt{3}$

(10) $2y = 12\sqrt{3}$

$y = 6\sqrt{3}$

$x = 6\sqrt{3} \cdot \sqrt{3}$

$6\sqrt{9} = \boxed{18}$

D3 9.4 & 9.5

p491 #3-6

p498 #3-16

p491

$$\begin{aligned} \textcircled{3} \quad \tan R &= \frac{45}{28} \\ \tan S &= \frac{28}{45} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad \tan D &= \frac{7}{24} \\ \tan F &= \frac{24}{7} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad \tan H &= \frac{1}{2} \\ \tan G &= \frac{2}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{2\sqrt{5}}{5} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad \tan J &= \frac{15}{3} \\ \tan K &= \frac{3}{5} \end{aligned}$$

p498

$$\begin{aligned} \textcircled{3} \quad \sin D &= \frac{12}{15} & \sin E &= \frac{9}{15} \\ \cos D &= \frac{9}{15} & \cos E &= \frac{12}{15} \end{aligned}$$

$$\textcircled{13} \quad \cos 59 = .5150 \\ \sin 31$$

$$\begin{aligned} \textcircled{4} \quad \sin D &= \frac{35}{37} & \sin E &= \frac{12}{37} \\ \cos D &= \frac{12}{37} & \cos E &= \frac{35}{37} \end{aligned}$$

$$\textcircled{14} \quad \cos 42 = .7431 \\ \sin 48$$

$$\begin{aligned} \textcircled{5} \quad \sin D &= \frac{28}{53} & \sin E &= \frac{45}{53} \\ \cos D &= \frac{45}{53} & \cos E &= \frac{28}{53} \end{aligned}$$

$$\textcircled{15} \quad \cos 73 = .2924 \\ \sin 17$$

$$\begin{aligned} \textcircled{6} \quad \sin D &= \frac{36}{45} & \sin E &= \frac{27}{45} \\ \cos D &= \frac{27}{45} & \cos E &= \frac{36}{45} \end{aligned}$$

$$\textcircled{16} \quad \cos 18 = .9511 \\ \sin 72$$

$$\textcircled{9} \quad .6018 \quad \cos 53$$

$$\textcircled{10} \quad \sin 81 = .9877 \quad \cos 9$$

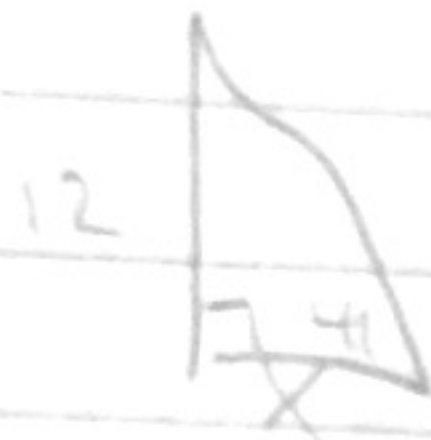
$$\textcircled{11} \quad \sin 29 = .4848 \quad \cos 61$$

$$\textcircled{12} \quad \sin 64 = .8988 \quad \cos 26$$

D4 p 491 #7-10

p498 #17-22

(7) SOH CAH (TOA)



$$\tan 41 = \frac{x}{12}$$

$$.8693 = \frac{x}{12}$$

$$x = 10.43$$

(8)



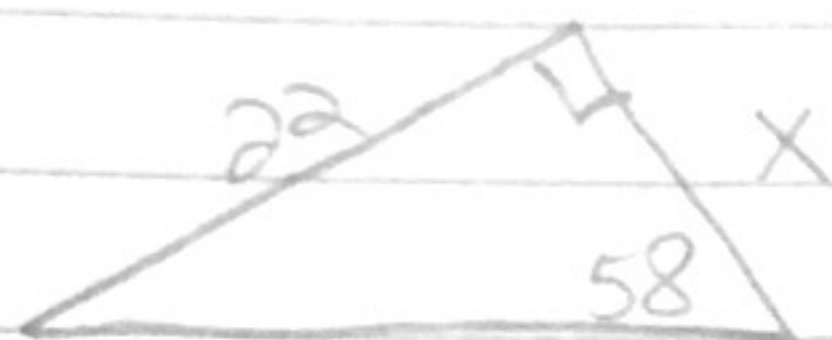
SOH CAH (TOA)

$$\sin 27 = \frac{x}{15}$$

$$.4536 = \frac{x}{15}$$

$$x = 7.64$$

(9)



$$\sin 22 = \frac{x}{58}$$

$$.3746 = \frac{x}{58}$$

$$.3746x = 22$$

$$x = 13.75$$

(10)



$$\sin 37 = \frac{6}{x}$$

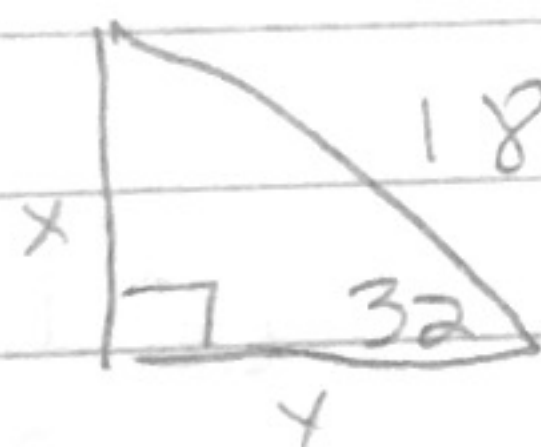
$$.6018 = \frac{6}{x}$$

$$.6018x = 6$$

$$.6018x = 6$$

$$x = 7.96$$

(11)



X

$$\sin 32 = \frac{x}{18}$$

$$.5299 = \frac{x}{18}$$

$$x = 9.54$$

Y

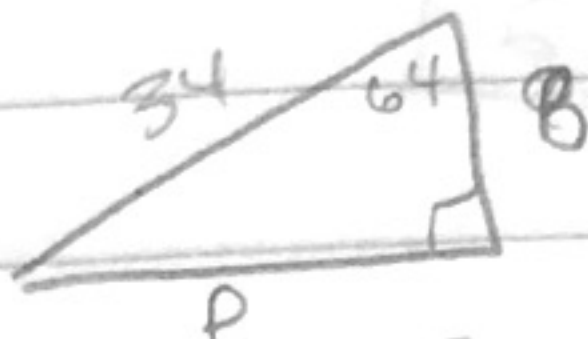
$$\cos 32 = \frac{y}{18}$$

$$.8481 = \frac{y}{18}$$

$$y = 15.26$$

(18)

P



$$\sin 34 = \frac{8}{p}$$

$$.5592 = \frac{8}{p}$$

$$p = 30.56$$

Q

$$\cos 34 = \frac{q}{p}$$

$$.8290 = \frac{q}{30.56}$$

$$q = 14.90$$

D5 p 505 #7-12

(7) 48.59°

(8) 10.95°

(9) 70.73°

(10) 50.21°

(11) 15.64°

(12) 35.76°