p. 82 Ex.1

$\angle B = 83°$　　$\angle C = 55°$

$b = ?$　　　　$c = 8.3$ cm

(b) ← start w/ unknown on top

$$\frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{b}{\sin 83°} = \frac{8.3}{\sin 55°}$$

$$b = \sin(83°)\left(\frac{8.3}{\sin 55°}\right)$$

$$b = 10.05\ldots$$

$$\boxed{b \doteq 10.1 \text{ cm}}$$

Ex.2 $\dfrac{\sin B}{10} = \dfrac{\sin 110°}{17}$

$\sin B = 10 \left(\dfrac{\sin(110°)}{17} \right)$

$\sin B = 0.552...$

$\angle B = \sin^{-1}(ANS)$

$\boxed{\angle B = 34°}$

p.86 #1-3
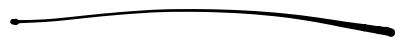
p. 89 #4

a) $\sin A = \dfrac{h}{b}$

$h = b \sin A$

$h = 92 \sin 48°$

$h = 68.37$

b) $h = 15 \sin 40°$

$h = 9.64$

c) $h = m \sin L$

$h = 3.75 \sin 36°$

$h = 2.20$

p. 83 | Ex. 3 |

$h = b \sin A$
$= 15 (\sin 60°)$

$h \doteq 13$

$b = 15$ S   C   S   14

$60°$

A   A   B

| $h < a < b$ |

C

b   a   h

A B_1

C

b   a   h

A B_2

b)   S   L   S

k = 10.3   42°   6.9 = j

J   A   K

$h = k \sin J$
$= 10.3 \sin 42°$
$h = 6.9$

$h=j$

L

$j=h$

J

K

⬜ one △

⬜ p.90 #5

c)

10

$10 = a$

A

B

$a = b$

⬜ zero △

p.84 Ex.4

b=6

a=3

$70°$

A   B

$h = b\sin A$

$h = 5.6$

$a < h \Rightarrow$ $\boxed{0 \; \triangle\text{'s}}$

$\boxed{\text{Ex.5}}$

C

6.4   (4.8)

h

$18°$

A $h = 1.98$ B

$\boxed{h < a < b} \Rightarrow \boxed{2 \triangle\text{'s}}$
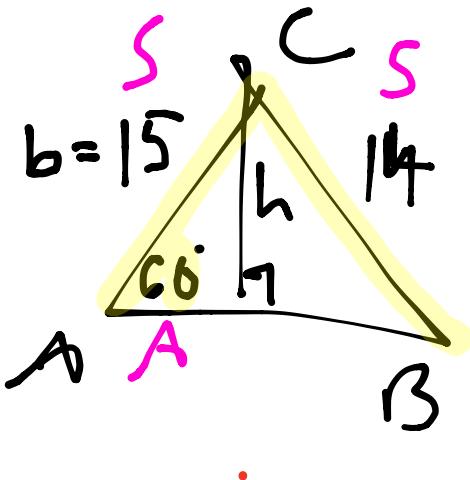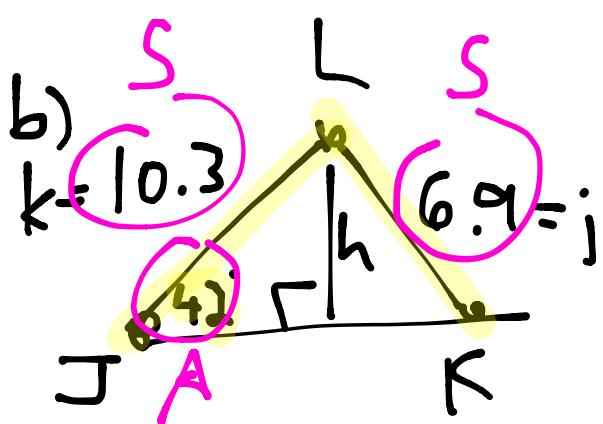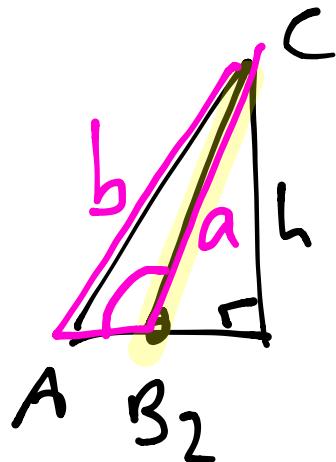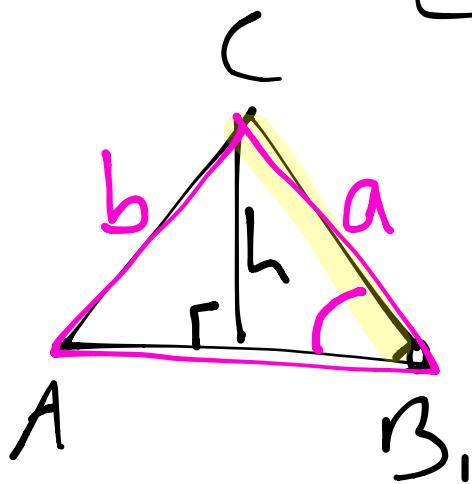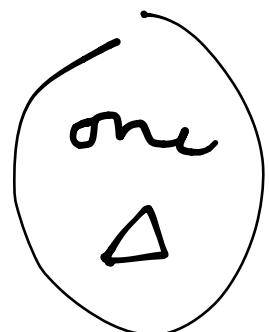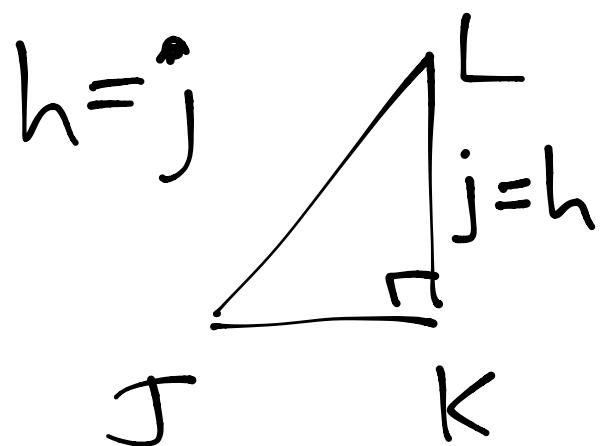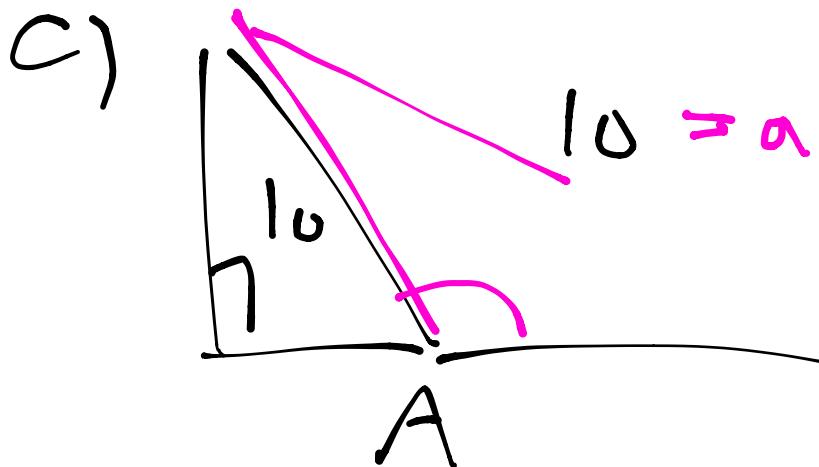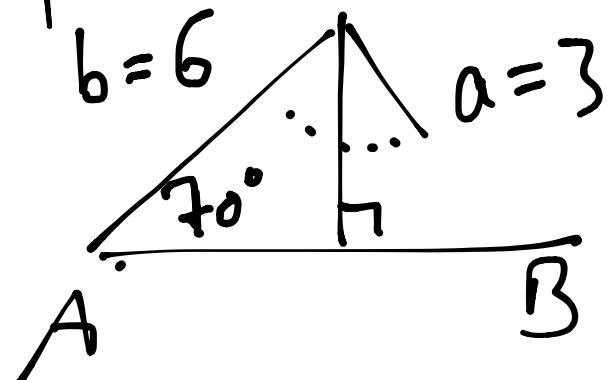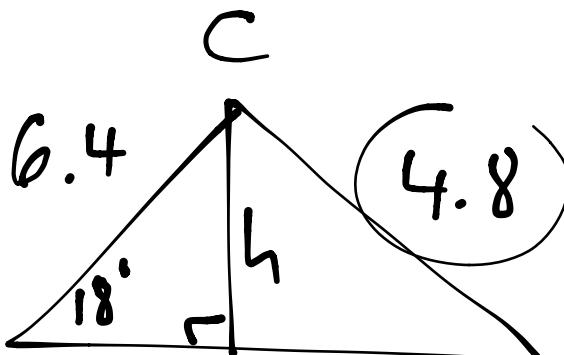
$\triangle 1$

$$\frac{\sin B}{6.4} = \frac{\sin 18°}{4.8}$$

$$\boxed{<B = 24°}$$

$$\boxed{<C = 138°}$$

$$\frac{c}{\sin 138°} = \frac{4.8}{\sin 18°}$$

$$\boxed{c = 10.4}$$

p.91 #7-8

$\triangle 2$

$$<B = 180°$$
$$-24$$
$$\boxed{<B = 156°}$$

$$<C = 180°$$
$$-18°$$
$$-156°$$
$$\boxed{<C = 6}$$

$$\frac{c}{\sin 6°} = \frac{4.8}{\sin 18°}$$

$$\boxed{c = 1.6}$$