

P182
#1 a)

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

$$24^2 + 32^2 = c^2$$

$$40 = c$$

b)

x

$$a^2 = y \cdot c$$

$$b^2 = x \cdot c$$

$$h^2 = x \cdot y$$

$$a \cdot b = h \cdot c$$

$$18^2 = 8y$$

$$\frac{324}{8} = \frac{8y}{8}$$

$$40.5 = y$$

c)

$a^2 = y \cdot c$
 $b^2 = x \cdot c$
 $h^2 = x \cdot y$
 $a \cdot b = h \cdot c$

$b^2 = xc$
 $9^2 = 41x$
 $\frac{81}{41} = \frac{41x}{41}$
 $1.98 = x$

d)

$a^2 = y \cdot c$
 $b^2 = x \cdot c$
 $h^2 = x \cdot y$
 $a \cdot b = h \cdot c$

① $a^2 = yc$ ② $x = 16 - 4 = 12$
 $8^2 = 4c$
 $\frac{64}{4} = \frac{4c}{4}$
 $16 = c$

#2

$a^2 = y \cdot c$
 $b^2 = x \cdot c$
 $h^2 = x \cdot y$
 $a \cdot b = h \cdot c$

a) m \overline{AC} : $a^2 + b^2 = c^2$
 $10^2 + b^2 = 26^2$
 $100 + b^2 = 676$
 $\sqrt{b^2} = \sqrt{576}$
 $b = 24$

b) m \overline{CD} : $a \cdot b = h \cdot c$
 $10(24) = 26h$
 $\frac{240}{26} = \frac{26h}{26}$
 $9.23 = h$

c) m \overline{BD} : $a^2 = y \cdot c$
 $10^2 = 26y$
 $\frac{100}{26} = \frac{26y}{26}$
 $3.85 = y$

#3

$a^2 = y \cdot c$
 $b^2 = x \cdot c$
 $h^2 = x \cdot y$
 $a \cdot b = h \cdot c$

$b^2 = x \cdot c$
 $5.6^2 = x \cdot 10.77$
 $31.36 = x \cdot 10.77$
 $\frac{31.36}{10.77} = \frac{x \cdot 10.77}{10.77}$
 $x = 2.9$