MEMO

Ex 11.1 Page 100 No. 1a-l, 4, 5

1a.) $\sqrt{36} = 6$

b.) $\sqrt{100} = 10$

c.) $\sqrt{8}$
$= \sqrt{4} \times \sqrt{2}$
$= 2\sqrt{2}$

d.) $\sqrt{12}$
$= \sqrt{4} \times \sqrt{3}$
$= 2\sqrt{3}$

e.) $\sqrt{18}$
$= \sqrt{9} \times \sqrt{2}$
$= 3\sqrt{2}$

f.) $\sqrt{50}$
$= \sqrt{25} \times \sqrt{2}$
$= 5\sqrt{2}$

g.) $\sqrt{5^2 + 12^2}$
$= \sqrt{25 + 144}$
$= \sqrt{169}$
$= 13$

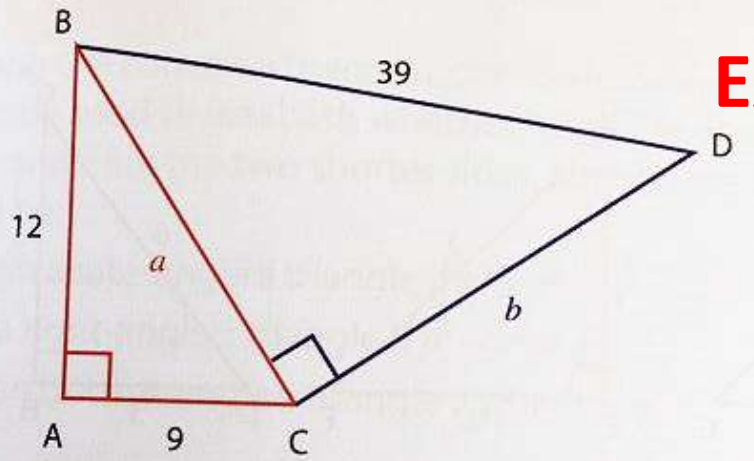
h.) $\sqrt{10^2 - 8^2}$
$= \sqrt{100 - 64}$
$= \sqrt{36}$
$= 6$

i.) $\sqrt{13^2 - 5^2}$
$= \sqrt{169 - 25}$
$= \sqrt{144}$
$= 12$

MEMO

Ex 11.1 Page 100 No. 1a-l, 4, 5

4.



$a^2 = 12^2 + 9^2$ Pythag

$a^2 = 144 + 81$

$a^2 = 225$

$a = 15$

$39^2 = 15^2 + b^2$ Pythag

$1521 = 225 + b^2$

$1521 - 225 = b^2$

$1296 = b^2$

$b = 36$

bi) Perimeter $= 12 + 9 + 36 + 39$

$= 96$

Area ABC $= \frac{1}{2} b \times h$

$= \frac{1}{2}(9)(12)$

$= 54$

Area BCD $= \frac{1}{2} b \times h$

$= \frac{1}{2}(15)(36)$

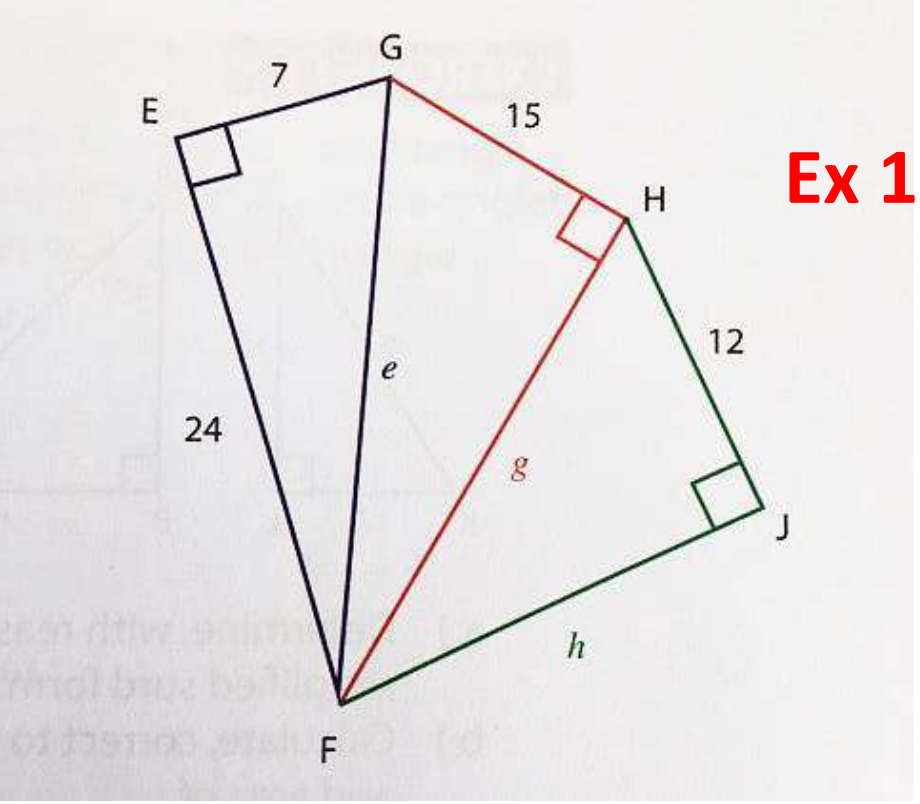
$= 270$

Area ACDB $= 54 + 270$

$= 324 \text{ units}^2$

MEMO

Ex 11.1 Page 100 No. 1a-l, 4, 5



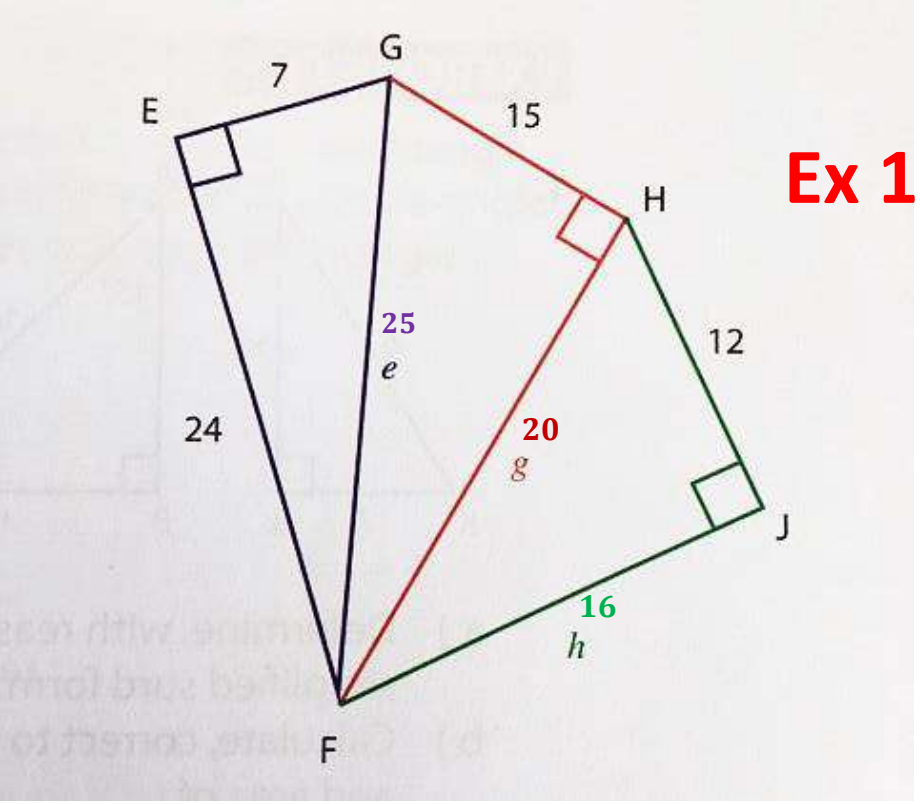
Statement	Reason
$EG^2 + EF^2 = GF^2$	*Pythag*
$(7)^2+(24)^2= e^2$	
$49 + 576 = e^2$	
$625 = e^2$	
$\sqrt{625} = \sqrt{e^2}$	
$e = 25$	

Statement	Reason
$GH^2 + FH^2 = GF^2$	*Pythag*
$(15)^2+(g)^2= 25^2$	
$225 + g^2 = 625$	
$g^2 = 625 - 225$	
$g^2 = 400$	
$\sqrt{g^2} = \sqrt{400}$	
$g = 20$	

$HJ^2 + FJ^2 = HF^2$	*Pythag*
$(12)^2+(h)^2= 20^2$	
$144 + h^2 = 400$	
$h^2 = 400 - 144$	
$h^2 = 256$	
$\sqrt{h^2} = \sqrt{256}$	
$h = 16$	

MEMO

Ex 11.1 Page 100 No. 1a-l, 4, 5



$$\boldsymbol{Perimeter}$$
$$= 24 + 16 + 12 + 15 + 7$$
$$= 74$$

$$\boldsymbol{Area\ EFG = \frac{1}{2}bh}$$
$$\boldsymbol{Area\ EFG = \frac{1}{2}(24)(7)}$$
$$\boldsymbol{Area\ EFG = 84}$$

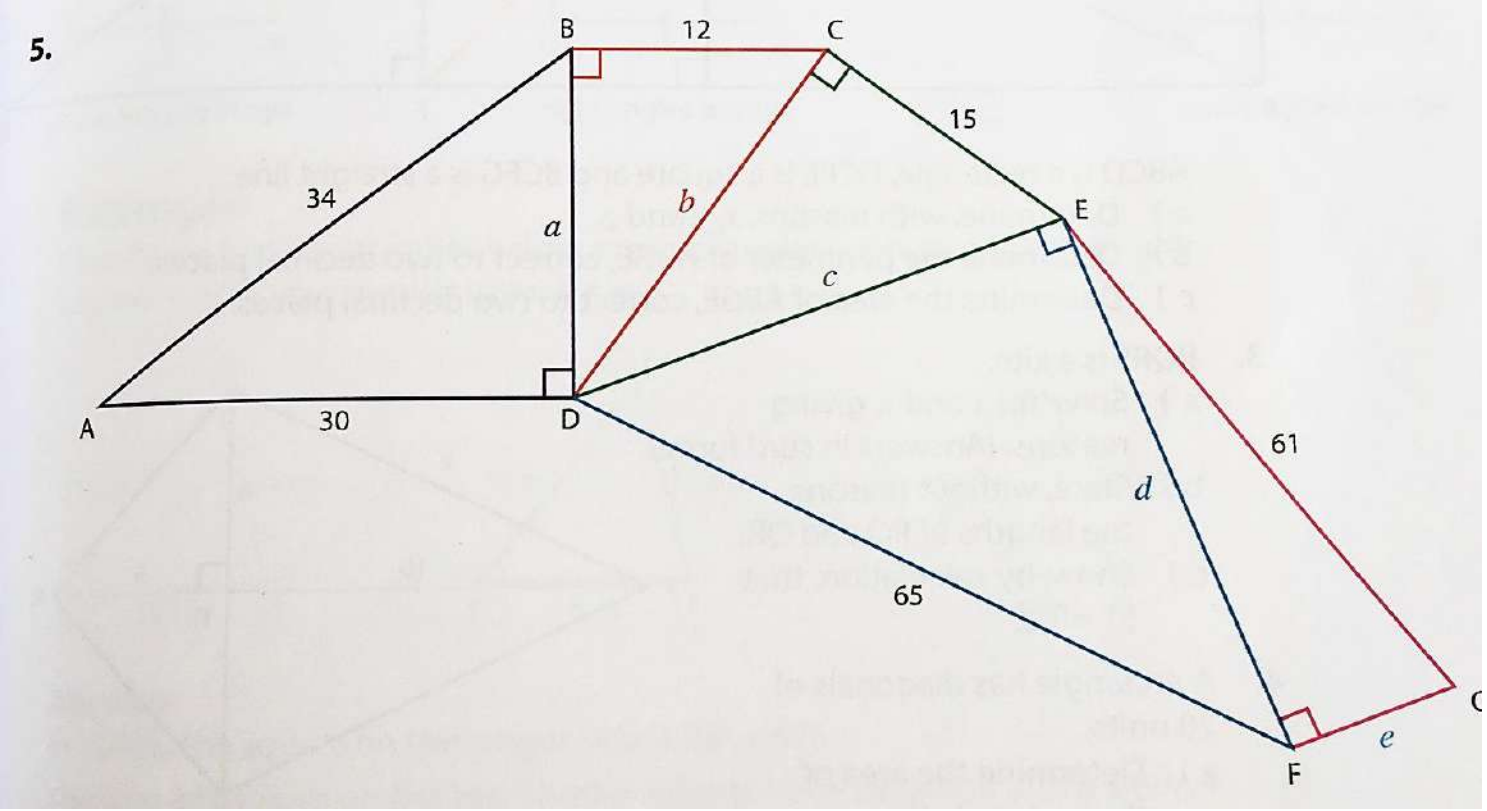
$$\boldsymbol{Area\ FGH = \frac{1}{2}bh}$$
$$\boldsymbol{Area\ FGH = \frac{1}{2}(20)(15)}$$
$$\boldsymbol{Area\ FGH = 150}$$

$$\boldsymbol{Area\ EFG = \frac{1}{2}bh}$$
$$\boldsymbol{Area\ EFG = \frac{1}{2}(16)(12)}$$
$$\boldsymbol{Area\ EFG = 96}$$

$$\underline{\boldsymbol{Area\ EFJHG}}$$
$$\boldsymbol{(Total\ Area)}$$

$$\boldsymbol{= 84 + 150 + 96}$$
$$\boldsymbol{= 330\ units^2}$$

5.



$a^2 + 30^2 = 34^2$ *Pythag*

$a^2 + 900 = 1156$

$a^2 = 1156 - 900$

$a^2 = 256$

$a = 16$

$16^2 + 12^2 = b^2$ *Pythag*

$256 + 144 = b^2$

$b^2 = 400$

$b = 20$

$20^2 + 15^2 = c^2$ *Pythag*

$400 + 225 = c^2$

$c^2 = 625$

$c = 25$

$25^2 + d^2 = 65^2$ *Pythag*

$625 + d^2 = 4225$

$d^2 = 4225 - 625$

$d^2 = 3600$

$d = 60$

$60^2 + e^2 = 61^2$ *Pythag*

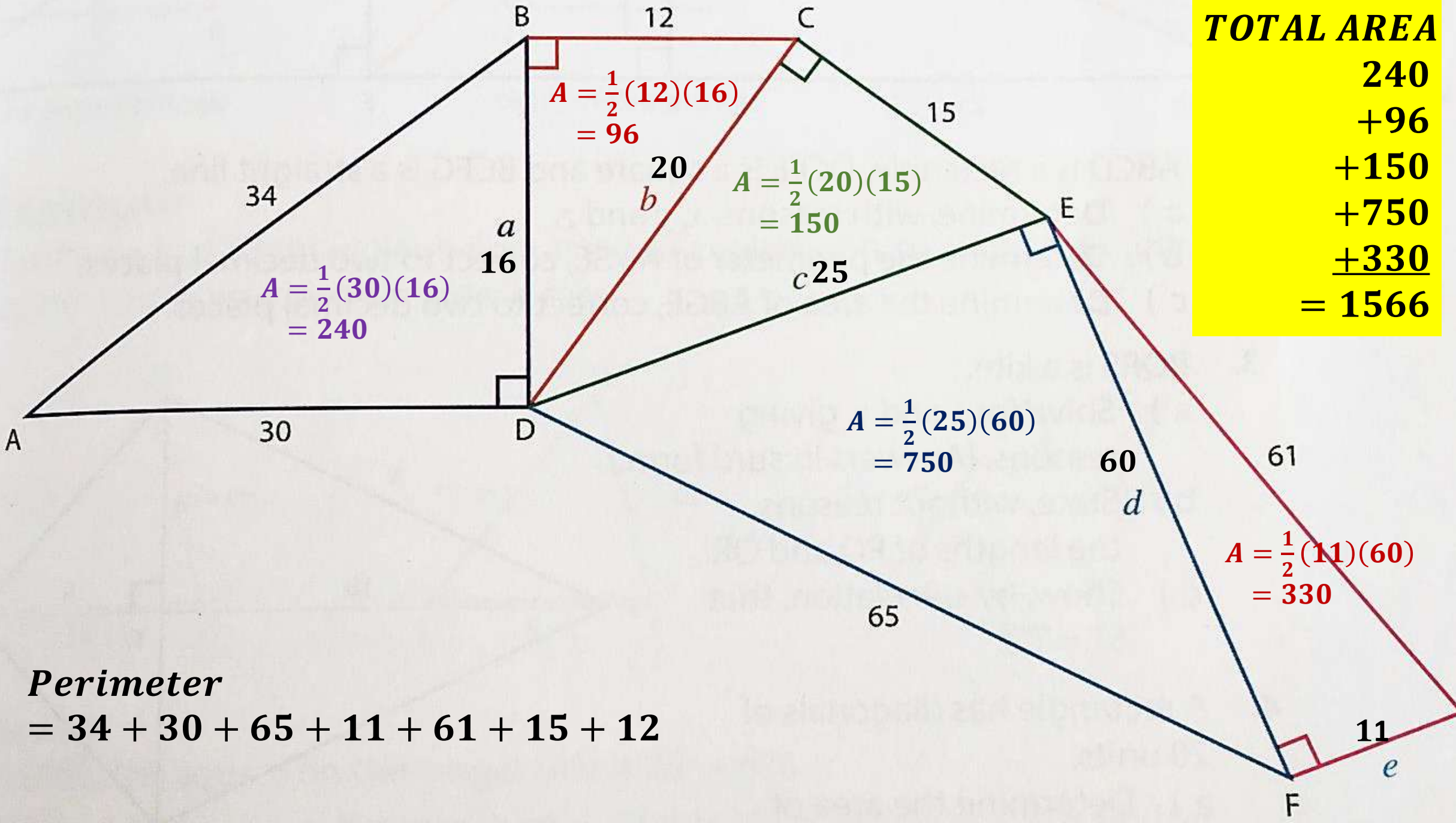
$3600 + e^2 = 3721$

$e^2 = 3721 - 3600$

$e^2 = 121$

$e = 11$

5.



TOTAL AREA

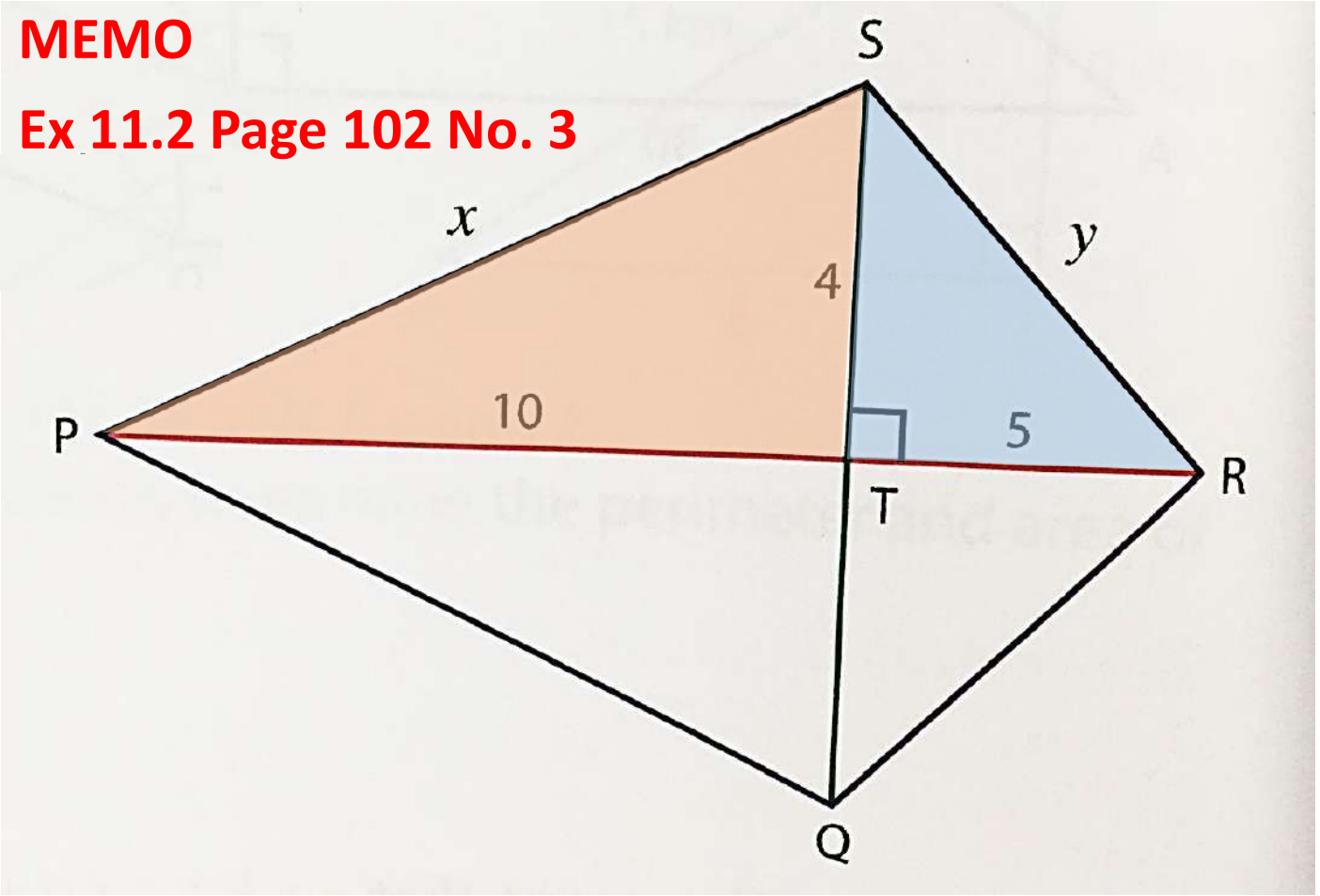
240
$+96$
$+150$
$+750$
$+330$
$= 1566$

Perimeter

$= 34 + 30 + 65 + 11 + 61 + 15 + 12$

MEMO

Ex 11.2 Page 102 No. 3



Solve for x and y

$a.)\ 10^2 + 4^2 = x^2 \quad Pythag$

$100 + 16 = x^2$

$116 = x^2$

$x = 2\sqrt{29}$

$4^2 + 5^2 = y^2 \quad Pythag$

$16 + 25 = y^2$

$41 = y^2$

$y = \sqrt{41}$

c.) Show my calculation that $ST = TQ$

$TQ^2 + TR^2 = QR^2 \quad Pythag$

$TQ^2 + 5^2 = \sqrt{41}^2$

$TQ^2 = 41 - 25$

$TQ^2 = 16$

$TQ = 4$

$b.)\ PQ = x = 2\sqrt{29}$

$QR = y = \sqrt{41}$

Adjacent sides of a kite are equal

Homework

Revision Exercise

Page 105

(No. 5)

5a.) Calculate x, y and z.

b.) Classify ΔABC

c.) Calculate the area of ADBECF, showing all necessary working.