p. 521-526 #1-20 all

1. yes, no
2. no
3. yes, yes
4. $73+n=180$ $n=107°$
5. $51+n=180$ $n=129°$
6. $68°$ (think: corresponding angles)
7. $\frac{28+13}{2} = \boxed{20.5}$
8. $\frac{6+n}{2}=13$ $6+n=26$ $\boxed{n=20}$

Ooops! out of order

13. $EW=ES$ $3^2+7^2=c^2$ $9+49=c^2$ $\sqrt{c^2}=\sqrt{58}$ $=\sqrt{58}\ (EW=ES)$

$ST=WT$ $3^2+10^2=c^2$ $9+100=c^2$ $\sqrt{109}=\sqrt{c^2}$ $=\sqrt{109}\ (ST=WT)$

9. $\frac{4x+6}{2}=x+5$ $4x+6=2x+10$ $2x=4$ $x=2$ $2+5=\boxed{7}$

10. $\boxed{\angle E=\angle T=118°}$ $360-(29+95)=236\,|\,2=118°$

12. $\boxed{m\angle E=88°}$ $107+88+88=283$ $360-283=77°$

14. $PQ = PS = \sqrt{157}$

$6^2 + 11^2 = c^2$

$36 + 121 = c^2$

$157 = c^2 \quad c = \sqrt{157}$

$QR = SR = \sqrt{232} = 2\sqrt{58}$

$6^2 + 14^2 = c^2$

$36 + 196 = c^2$

$232 = c^2$

15. $EH = EF = 3\sqrt{34}$

$9^2 + 15^2 = c^2$

$81 + 225 = c^2$

$\sqrt{c^2} = \sqrt{306} \quad c = \sqrt{306} = 3\sqrt{34}$

$HG = FG = 9\sqrt{5}$

$9^2 + 18^2 = c^2$

$81 + 324 = c^2$

$\sqrt{c^2} = \sqrt{405} = 9\sqrt{5}$

16. $\frac{6x - 1 + 27}{2} = 20.5$

$6x + 26 = 41$

$6x = 15$

$x = 15/6 = 2\frac{1}{2}$

17. $\frac{34.5 + 9x + 8}{2} = 41.5$

$42.5 + 9x = 83$

$9x = 40.5 \quad x = 4.5$

18. $\frac{62.2 + 8x + 2}{2} = 56.9$

$64.2 + 8x = 113.8$

$8x = 49.6$

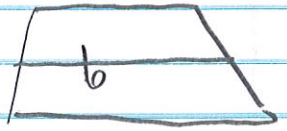
19. $x + x + 2x + 2x = 360$

$6x = 360$

$x = 60$

60°, 60°, 120°, 120°

20.



base + base = 12