5-3 Skills Practice

Name Master 6

Date _____ Block 6

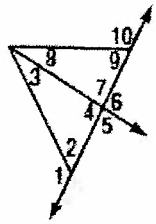
Determine which angle has the greatest measure.

1. ∠1, ∠3, ∠4

2. ∠4, ∠8, ∠9

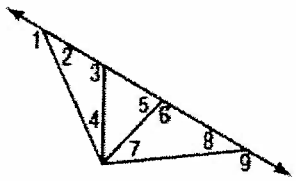
3. ∠2, ∠3, ∠7

4. ∠7, ∠8, ∠10



Ext. ∠1

Use the Exterior Angle Inequality Theorem to list all angles that satisfy the stated condition.



5. all angles whose measures are less than $m\angle 1$

∠2 looker

∠3, ∠4, ∠5, ∠7, ∠8

6. all angles whose measures are less than $m\angle 3$

∠2 ∠4

∠5, ∠7, ∠8

7. all angles whose measures are greater than $m\angle 7$

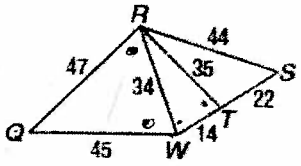
∠9, ∠5, ∠3, ∠1

8. all angles whose measures are greater than $m\angle 2$

∠1 ∠3

∠6, ∠9,

Determine the relationship between the measures of the given angles.



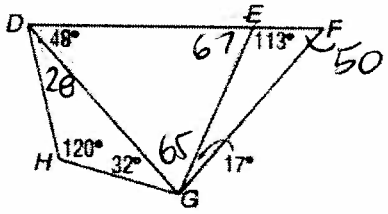
9. $m\angle QRW$ (45), $m\angle RWQ$ (47) — <

10. $m\angle RTW$ (34), $m\angle TWR$ (35) — <

11. $m\angle RST$ (35), $m\angle TRS$ (22) — >

12. $m\angle WQR$ (34), $m\angle QRW$ (45) — <

Determine the relationship between the lengths of the given sides.



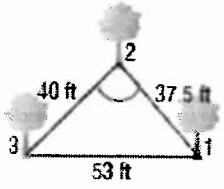
13. $\overline{DH}$ (32), $\overline{GH}$ (28) — >

14. $\overline{DE}$ (65), $\overline{DG}$ (67) — <

15. $\overline{EG}$ (50), $\overline{FG}$ (113) — <

16. $\overline{DE}$ (65), $\overline{EG}$ (48) — >

17. **SPORTS** The figure shows the position of three trees on one part of a Frisbee™ course. At which tree position is the angle between the trees the greatest?



Position #2

5-5 Skills Practice

Name Master 6

Date _____ Block 6

Is it possible to form a triangle with the given side lengths? State YES or NO & justify your answer.

1. 2 ft, 3 ft, 4 ft $2+3>4$? $5>4$ yes

2. 5 m, 9 m, 7 m $5+7>9$? $12>9$ yes

3. 4 mm, 11 mm, 8 mm $4+8>11$? $12>11$ yes

4. 13 in, 13 in, 26 in $13+13>26$? $26 \not> 26$ No

5. 20 cm, 9 cm, 10 cm $9+10>20$? $19 \not> 20$ NO

6. 15 km, 17 km, 19 km $15+17>19$? $32>19$ yes

7. 14 yd, 17 yd, 31 yd $14+17>31$? $31 \not> 31$ No

8. 12 m, 7 m, 6 m $7+6>12$? $13>12$ Yes

Find the range for the measure of the third side of a triangle given the measures of two sides.

9. 5 ft, 9 ft $4<x<14$

10. 7 in, 14 in $7<x<21$

11. 8 m, 13 m $5<x<21$

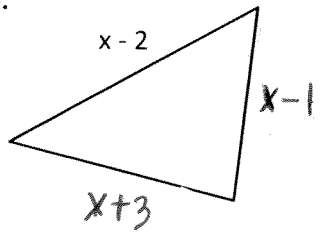
12. 10 mm, 12 mm $2<x<22$

13. 12 yd, 15 yd $3<x<27$

14. 15 km, 27 km $12<x<42$

Determine the possible value of x.

15.

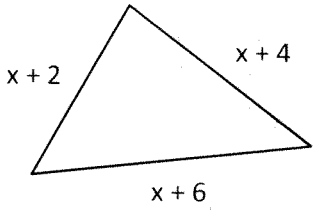


$x-2+x-1>x+3$

$2x-3>x+3$

$x>6$

16.



$x+2+x+4>x+6$

$2x+6>x+6$

$x>0$