

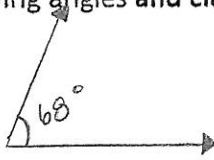
Chapter 5 – Angles and Parallel Lines REVIEW SHEET

Math 10

Name: Key (2011)

1. Draw each of the following angles and classify as: acute, right, obtuse, straight, or reflex.

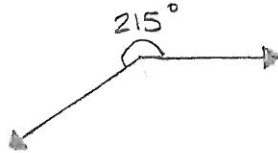
a. 68°
Acute



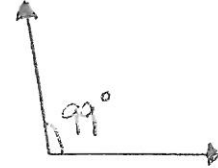
e. 180°
Straight



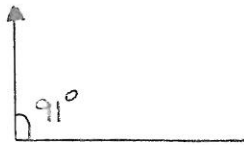
b. 215°
Reflex



f. 99°
Obtuse

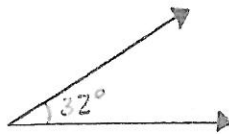


c. 91°
Obtuse

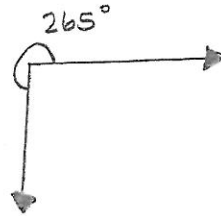


g. 195°
Reflex

d. 32°
Acute



h. 265°
Reflex

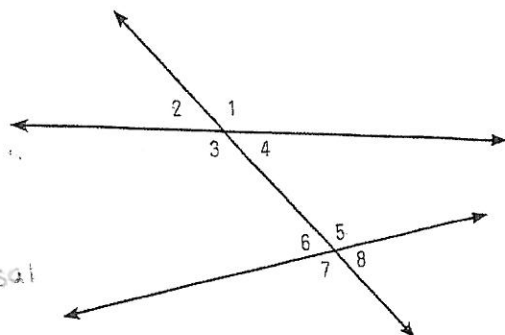


2. Fill in the missing parts in the table. If no such angle exists, write "NOT POSSIBLE" in the correct box.

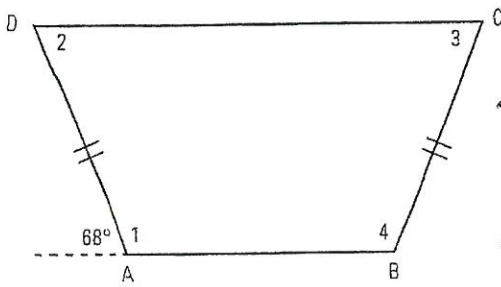
ANGLE CALCULATIONS			
ANGLE	COMPLEMENT	SUPPLEMENT	RESULTING ANGLE MEASURE AFTER THE ANGLE IS BISECTED
73°	17°	107°	36.5°
78°	12°	102°	39°
15°	75°	165°	7.5°
48°	42°	132°	24°
90°	Not Possible	90°	45°
68°	22°	112°	34°
41°	49°	139°	20.5°
136°	Not Possible	44°	68°
80°	10°	100°	40°
254°	Not Possible	Not Possible	127°

3. Name the relationship between the indicated pairs of angles.

- $\angle 3$ and $\angle 5$ = Alt. int. \angle 's
- $\angle 4$ and $\angle 5$ = Int. \angle 's on same side of transversal
- $\angle 2$ and $\angle 4$ = Vert. opp. \angle 's
- $\angle 1$ and $\angle 5$ = Corr. \angle 's
- $\angle 1$ and $\angle 7$ = Alt. ext. \angle 's
- $\angle 2$ and $\angle 7$ = Ext. \angle 's on same side of transversal



4. What are the measures of the interior angles in the trapezoid shown below? (Hint: Be careful of the order in which you calculate the angles).



$$\angle 1 = 180^\circ - 68^\circ = 112^\circ$$

$$\angle 3 = 68^\circ$$

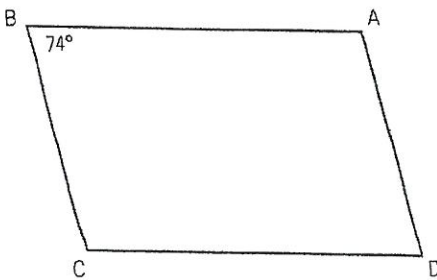
• Int. \angle 's on same side of trans.

$$\angle 2 = 68^\circ$$

$$\angle 4 = 112^\circ$$

• Int. \angle 's on same side of trans. **OR**
Alt. int. \angle 's =

5. Quadrilateral ABCD is a parallelogram in which $\angle B$ measures 74° . Determine the measures of the other angles and state your reasons.



$$\angle A = 180^\circ - 74^\circ = 106^\circ$$

supp to $\angle B$

$$\angle C = 106^\circ$$

supp to $\angle B$

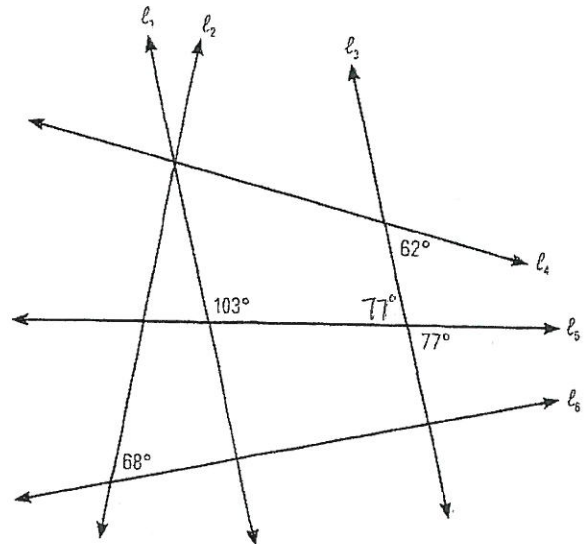
$$\angle D = 74^\circ$$

supp to $\angle A$

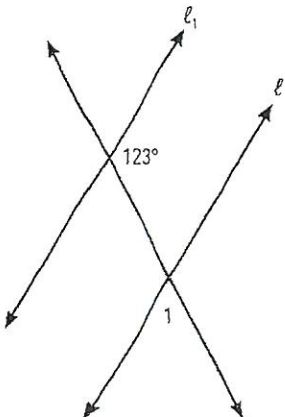
6. Find a pair of parallel lines in the following diagram. On the diagram, mark all the angles necessary to determine this.

l_1 & l_3 are parallel

$$103^\circ + 77^\circ = 180^\circ$$



7. What size must $\angle 1$ be if L_1 is parallel to L_2 ?

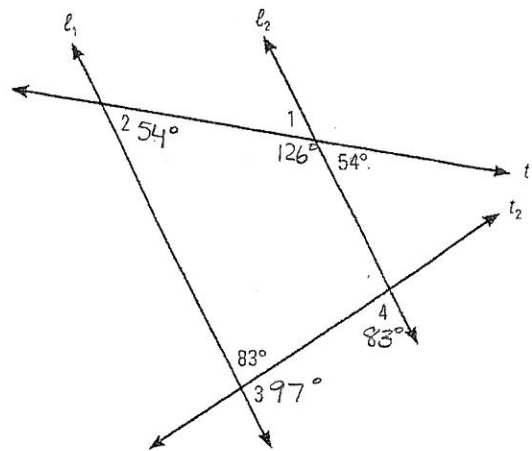


$$\angle 1 = 57^\circ$$

$$180^\circ - 123^\circ = 57^\circ$$

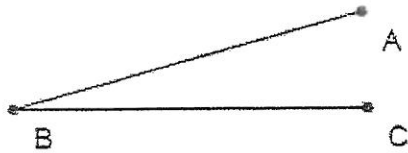
8. If L_1 and L_2 are parallel and are intersected by transversals t_1 and t_2 , what are the measures of the indicated angles? Solve for the measures in the given order, stating your reasoning.

SOLVING ANGLE MEASURES	
ANGLE MEASURE	REASON
$\angle 1 = 54^\circ$	Alt. Int. \angle 's =
$\angle 2 = 54^\circ$	Corr. \angle 's =
$\angle 3 = 97^\circ$	Supp. \angle 's = 180°
$\angle 4 = 83^\circ$	Alt. Int. \angle 's =

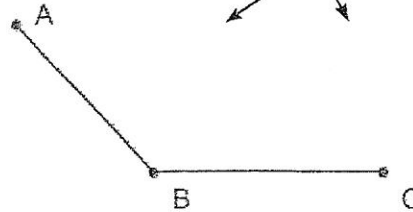


9. Measure the following angles and complete the table.

$\angle 1$.



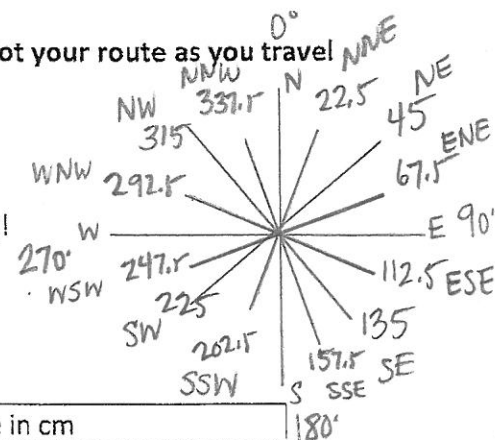
$\angle 2$.



	$\angle 1$	$\angle 2$
Measurement of angle	15°	133°
Type of angle	acute	obtuse
Size of complementary angle	75°	already above 90°
Size of supplementary angle	165°	47°

10. After high school you decide to reward your hard work with a trip to Africa. Plot your route as you travel from country to country using True North as your bearing.

- Your plane lands in Zimbabwe and you check out Victoria Falls
- You next head to Egypt to see the Pyramids of Giza.
- Now it's off to Omo River in Ethiopia for some White Water rafting!
- Time to climb Mount Kilimanjaro in Tanzania.
- Off to South Africa to do some Scuba Diving.
- Back to Zimbabwe to take your flight back home.

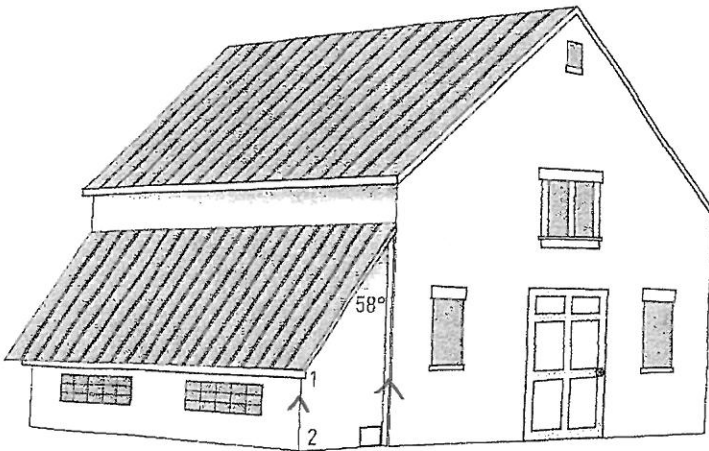


Location	Bearing from True North	Distance in cm
Zimbabwe \rightarrow Egypt	2° NNE	11.2 cm
Egypt \rightarrow Ethiopia	166° SSE	5.65 cm
Ethiopia \rightarrow Tanzania	175° SSE	2.5 cm

Tanzania → South Africa	210° SSW	8.2 cm
South Africa → Zimbabwe	30° NNE	4.5 cm

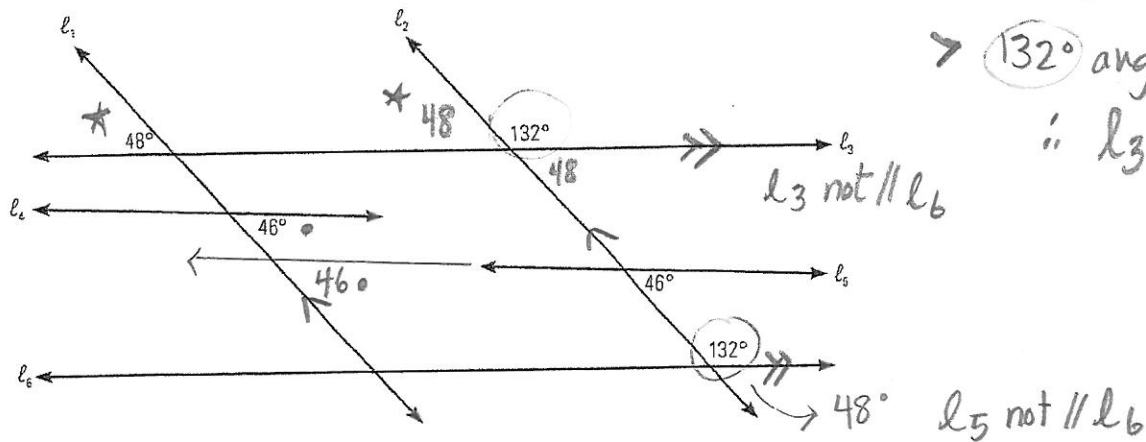


11. In the diagram below, if the side of the house and the side of the shed are parallel, what are the measures of $\angle 1$ and $\angle 2$?



statement	Reason
$\angle 1 = 180 - 58 = 122^\circ$	If lines \parallel , then same side int angles are supplementary
$\angle 2 = 180 - 90 = 90^\circ$	Same as above

12. Identify the pairs of parallel lines in the following diagram. (Hint: The lines can be extended).



\rightarrow 132° angles are corresponding
 $\therefore l_3$ and l_5 are \parallel

l_3 not \parallel l_6

48° l_5 not \parallel l_6

\rightarrow \star 48° are corresponding
 $\therefore l_1$ and l_2 are \parallel

\rightarrow If l_1 and l_2 are \parallel then \circ is 46°
 because \circ 46° are also corresponding,
 then $l_4 \parallel l_5$