1. Name the following angles
a)


e)
$\xrightarrow{\uparrow}$
f)

c)

d)

g) $215^{\circ}$
h) $32^{\circ}$
i) $99^{\circ}$
j) $180^{\circ}$
2. Fill in the parts of the table that are missing if they exist.

ANGLE CALCULATIONS

| Angle | Complement | Supplement | Resulting angle <br> measure after the <br> angle is bisected |
| :--- | :--- | :--- | :--- |
| $73^{\circ}$ |  |  |  |
|  | $12^{\circ}$ |  |  |
| $15^{\circ}$ |  | $132^{\circ}$ |  |
|  |  |  | $34^{\circ}$ |
| $90^{\circ}$ |  |  |  |
|  | $49^{\circ}$ |  | $68^{\circ}$ |
|  |  | $100^{\circ}$ |  |
|  |  |  | $127^{\circ}$ |

3. Name the relationship between the angles

$\angle 3$ and $\angle 5$ : $\qquad$
$\angle 4$ and $\angle 5$ : $\qquad$
$\angle 1$ and $\angle 3$ : $\qquad$
$\angle 2$ and $\angle 6$ : $\qquad$
4. In the diagram below, $I_{1}$ is parallel to $I_{2}$. Determine the measures of the indicated angles and explain your reasons. Write the answers below:

5. Identify each of the following angles.

a) two angles corresponding to $\angle 1$
b) an interior angle on the same side of the transversal as $\angle 10$
c) an alternate interior angle to $\angle 5$
d) two interior angles on the same side of the transversal as $\angle 8$
6. In the following diagram find the missing angles if line $B E$ is parallel to line CD.

$\angle 1$ : $\qquad$ reason: $\qquad$
$\angle 2$ : $\qquad$ reason: $\qquad$
7. In the following trapezoid PS is parallel to $Q R$.
$\angle 1$ : $\qquad$ reason: $\qquad$
$\angle 2$ : $\qquad$ reason: $\qquad$

8. Find all of the angles in the diagram below and state why you chose that angle

9. Identify an acute angle, an obtuse angle and a reflex angle from the diagrams below.


|  | Acute | Obtuse |
| :---: | :---: | :---: |
| A. | $\angle \mathrm{PRQ}$ | $\angle \mathrm{ABC}$ |
| B. | $\angle \mathrm{PRQ}$ | $\angle \mathrm{PRS}$ |
| C. | $\angle \mathrm{URS}$ | $\angle \mathrm{PRS}$ |
| D. | $\angle \mathrm{QRT}$ | $\angle \mathrm{SRT}$ |
| QRT | $\angle \mathrm{PRS}$ | $\angle \mathrm{ABC}$ |

10. A footbridge is supported by diagonal braces that form a handrail, as shown below. Which pair of angles could be compared to determine if the rail is parallel to the bridge deck?

A. $\angle b$ and $\angle g$
B. $\angle c$ and $\angle h$
C. $\angle e$ and $\angle h$
D. $\angle f$ and $\angle g$
11. If a boat is travelling $25^{\circ}$ south of straight east, what is its true bearing?
12. What is the true bearing of a boat travelling south?
13. What is the true bearing of a boat travelling north-northwest?
