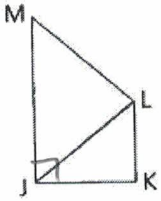


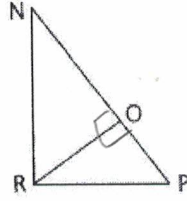
2 In each of the following, name the angles that can be proved to be right angles.

a Given: $\overline{JM} \perp \overline{JK}$



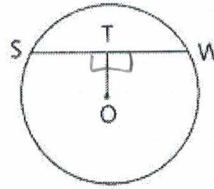
$\angle MLK$

b Given: $\overline{RO} \perp \overline{PN}$



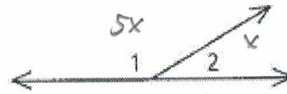
$\angle RON$ AND $\angle ROP$

c Given: $\overline{OT} \perp \overline{SW}$



$\angle OTS$ AND $\angle OTW$

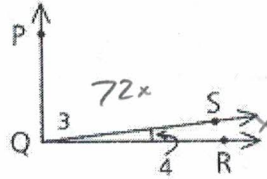
4 a $\angle 1$ is five times as large as $\angle 2$. Find $m\angle 2$.



$$\begin{aligned} 5x + x &= 180 \\ 6x &= 180 \\ x &= 30 \end{aligned}$$

$m\angle 2 = 30^\circ$

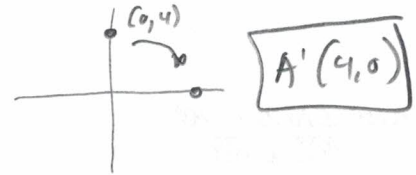
b $\angle 3$ is 72 times as large as $\angle 4$, and $\overline{PQ} \perp \overline{QR}$. Find $m\angle 4$ to the nearest tenth. (Hint: Use a calculator to do the arithmetic.)



$$\begin{aligned} 72x + x &= 90 \\ 73x &= 90 \\ x &= 1.2 \end{aligned}$$

$m\angle 4 \approx 1.2^\circ$

5 On a graph, point A is at (0, 4). Point A is then rotated 90° clockwise about the origin to point A'. What are the coordinates of A'?



$A'(4, 0)$

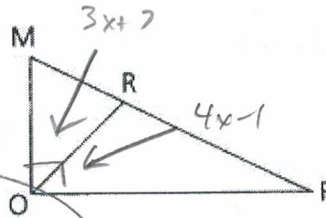
8 Given: $\angle MOR = (3x + 7)^\circ$,
 $\angle ROP = (4x - 1)^\circ$,
 $\overline{MO} \perp \overline{OP}$

Which angle is larger, $\angle MOR$ or $\angle ROP$?

$\angle ROP$

$$3(12) + 7 = 43^\circ$$

$$4(12) - 1 = 47^\circ$$

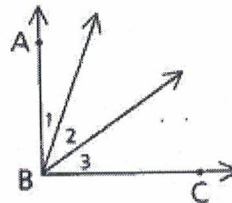


$$\begin{aligned} 3x + 7 + 4x - 1 &= 90 \\ 7x &= 84 \\ x &= 12 \end{aligned}$$

11 $\overline{AB} \perp \overline{BC}$ and angles 1, 2, and 3 are in the ratio 1:2:3. Find the measure of each angle. ~~15, 30, 45~~

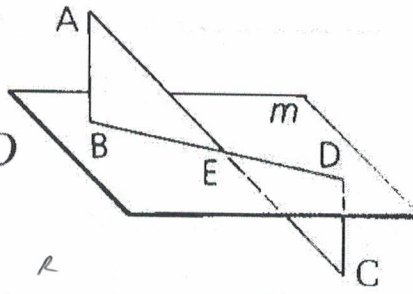
$$\begin{aligned} x + 2x + 3x &= 90 \\ 6x &= 90 \\ x &= 15 \end{aligned}$$

$$\begin{aligned} 1(15) &= 15^\circ \\ 2(15) &= 30^\circ \\ 3(15) &= 45^\circ \end{aligned}$$



10 Given: Diagram as shown

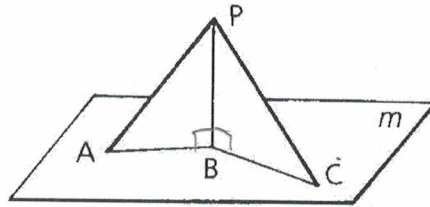
Prove: $\angle AEB \cong \angle CED$



S	R
1) $\angle AEB \cong \angle CED$	1) IF 2 ANGLES ARE VERTICAL ANGLES, THEN THEY ARE \cong .

2 Given: $\overline{PB} \perp m$

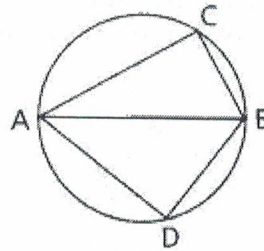
Prove: $\angle ABP \cong \angle CBP$



S	R
1) $\overline{PB} \perp m$	1) GIVEN
2) $\angle ABP$ RT. ANGLE	2) IF A SEGMENT IS PERP TO PLANE, THEN THEY FORM RIGHT ANGLES.
3) $\angle CBP$ RT. ANGLE	3) SAME AS STEP 2
4) $\angle ABP \cong \angle CBP$	4) IF 2 ANGLES ARE RT. ANGLES, THEN THEY ARE \cong .

7 Given: $\angle ACB = 90^\circ$,
 $\overline{AD} \perp \overline{BD}$

Prove: $\angle C \cong \angle D$ (Hint: This proof takes more than three steps.)



S	R
1) $\angle ACB = 90^\circ$	1) GIVEN
2) $\overline{AD} \perp \overline{BD}$	2) GIVEN
3) $\angle C$ RT. ANGLE	3) IF AN ANGLE IS 90° , THEN IT IS A RIGHT ANGLE
4) $\angle D$ RT. ANGLE	4) IF 2 SEGMENTS ARE PERP, THEN THEY FORM RT. ANGLES.
5) $\angle C \cong \angle D$	5) IF 2 ANGLES ARE RT. ANGLES, THEN THEY ARE \cong .