Geometry HW 2-3 Ans

① yes b/c $\angle 3$ and $\angle 14$ are $\cong$ alt ext $\angle$s

② No b/c alt int, alt ext, corr $\angle$s are not $=$ and cons int $\angle$s are not supp

③ yes b/c $\angle 2$ & $\angle 3$ are corr $\angle$s w/ $\angle 10$ and are $\cong$

④ $\angle 1$ & $\angle 2$ and $\angle 13$ are alt ext $\angle$s so $=$

$4x+4+3x+8 = 10x-30$

$7x+12 = 10x-30$

$42 = 3x$

$x = 14$

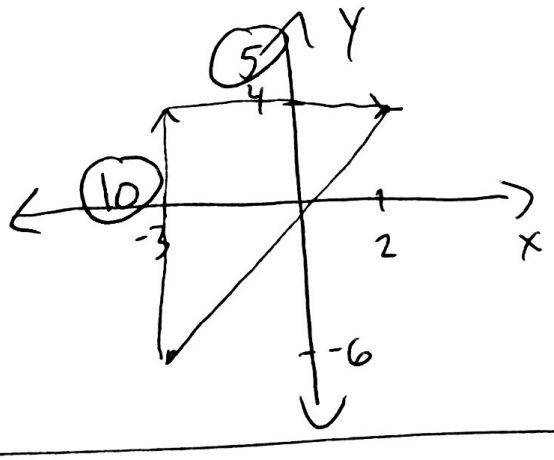
$\angle 1, \angle 2, \angle 3$ form a straight line so They Total $180°$

$m\angle 1 = 4(14)+4 = 60°$

$m\angle 2 = 3(14)+8 = 50°$

$m\angle 3 = 180-60-50 = \boxed{70°}$

⑤



$10^2+5^2 = x^2$

$\sqrt{125} = \sqrt{x^2}$

$\sqrt{125}$

$\sqrt{25}\sqrt{5} = \boxed{5\sqrt{5}}$

⑥ Slope → $\frac{10}{5} = \frac{2}{1}$

$\boxed{Y = 2x-1}$

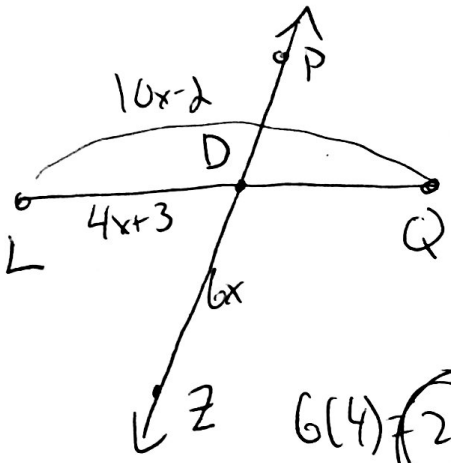
$y = mx+b$

$-3 = 2(-1)+b$

$-3 = -2+b$

$-1 = b$

(7)



$QL = 2 \cdot DL$ b/c bisector cuts seg in ½

$10x - 2 = (4x+3)2$

$10x - 2 = 8x + 6$

$2x = 8$

$\boxed{x = 4}$

$6(4) = \boxed{24}$

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(8) $m\angle 1 = m\angle 11$ b/c alt ext $\angle$s =

$3x + 3 = 4x - 13$

$\boxed{x = 16}$

$m\angle 13 = m\angle 1 + m\angle 2$ (alt ext $\angle$s =)

$9(16) - 35 = \boxed{109° = m\angle 13}$

$3(16) + 3 = \boxed{51° = m\angle 1}$

$109 - 51 = \boxed{58° = m\angle 2}$