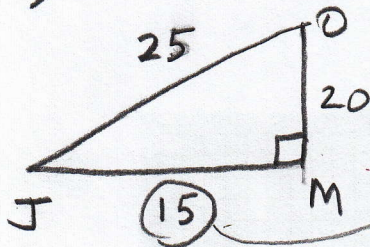


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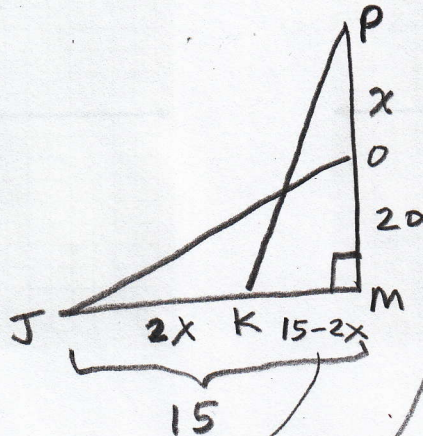
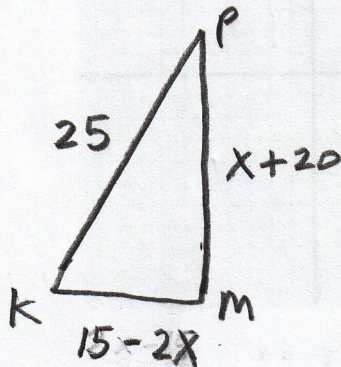
25)

The ladder = 25 units, so $JO = KP = 25$



$$(JM)^2 + 20^2 = 25^2$$

$$\therefore JM = 15$$



$$(15 - 2x)^2 + (x + 20)^2 = 25^2$$

$$225 - 60x + 4x^2 + x^2 + 40x + 400 = 625$$

$$625 - 20x + 5x^2 = 625$$

$$5x^2 - 20x = 0$$

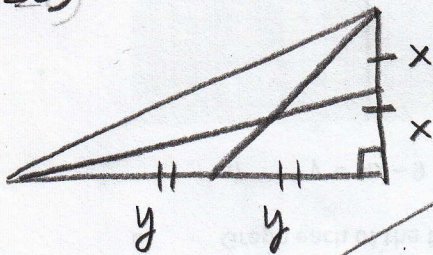
$$5x(x - 4) = 0$$

$$x \neq 0 \quad x = 4$$

$$KM = 15 - 2(4) = 15 - 8 = 7$$

$$KM = 7$$

26)



$$x^2 + (2y)^2 = (2\sqrt{13})^2$$

$$x^2 + 4y^2 = 4 \cdot 13$$

$$x^2 + 4y^2 = 52$$

$$(2x)^2 + y^2 = (\sqrt{73})^2$$

$$4x^2 + y^2 = 73$$

$$y^2 = 73 - 4x^2$$

$$x^2 + 4(73 - 4x^2) = 52$$

$$x^2 + 292 - 16x^2 = 52$$

$$-15x^2 = -240$$

$$x^2 = 16$$

$$x = 4$$

$$x^2 + 4y^2 = 52$$

$$16 + 4y^2 = 52$$

$$4y^2 = 36$$

$$y^2 = 9$$

$$y = 3$$

