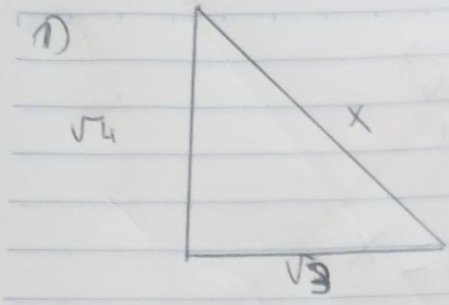
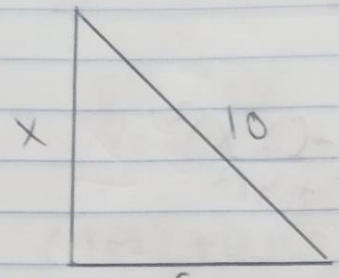
1)



$\sqrt{4}^2 + \sqrt{3}^2 = x^2$

$x = \sqrt{7}$

2)

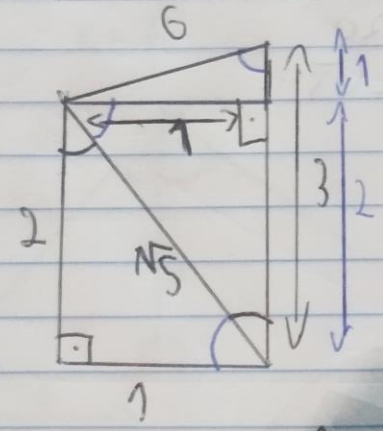


$x^2 + 36 = 100$

$x^2 = 64$

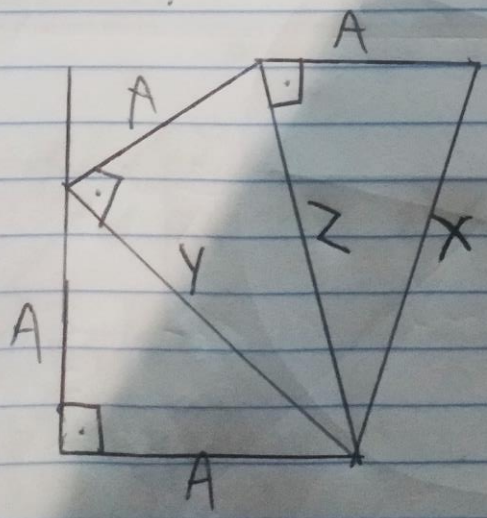
$x = 8$

3)



$1^x + 1^x = x^x$

$x = 2$



$A \cdot \sqrt{2} = Y$

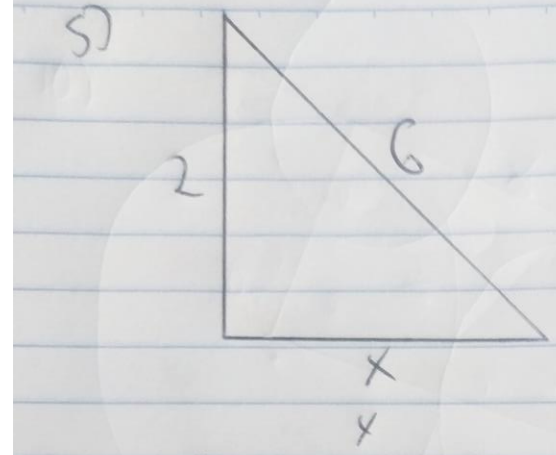
$(A\sqrt{2})^2 + A^2 = Z^2$

$Z = A\sqrt{3}$

$X^2 = (A\sqrt{3})^2 + A^2$

$Y = 2A$

5)



$x^2 + 2^2 = 6^2$

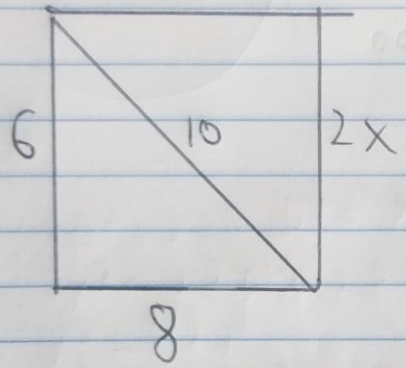
$x^2 = 36 - 4$

$x = \sqrt{32}$

$\frac{(2 \cdot \sqrt{32})}{2} = x$

$x = 4\sqrt{2}$

6)



$10^2 = x^2 + (2x)^2$

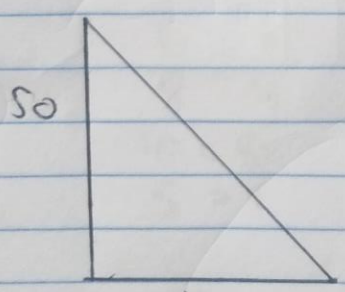
$100 = x^2 + 4x^2$

$100 = 5x^2$

$x^2 = 20$

$x = 2\sqrt{5}$

7)

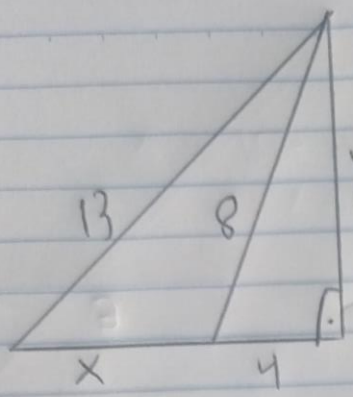


$50^2 + 120^2 = x^2$

$x = 130$

$x = 1,3$

8)



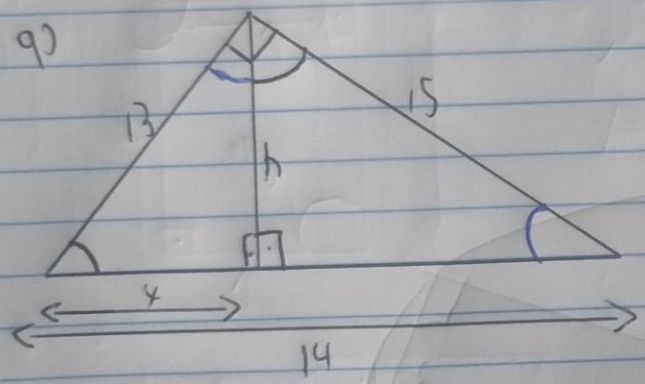
$8^2 = 4^2 + y^2$

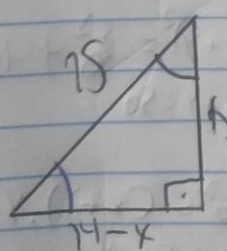
$y = 4\sqrt{3}$

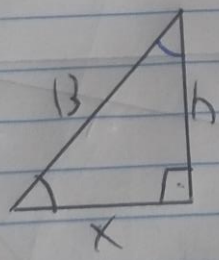
$(4\sqrt{3})^2 + (x+4)^2 = 13^2$

$x = 7$

9)







$h^2 = (14-x)^2 - 15^2$

$h^2 = 13^2 - x^2$

$(14-x)^2 - 15^2 = 13^2 - x^2$

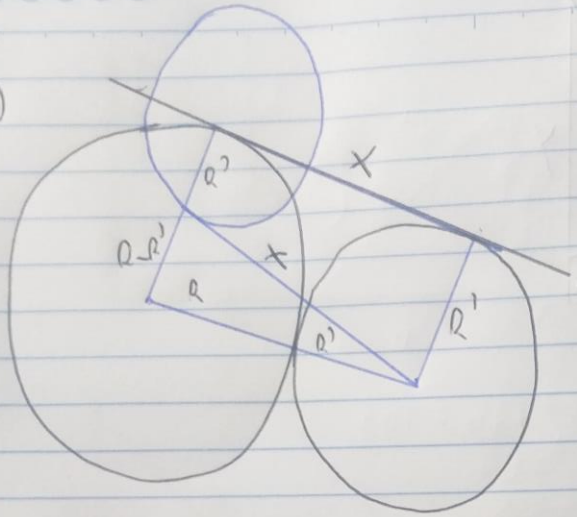
$28x = 169 - 21$

$x = 5$

$H^2 = 169 - 25$

$H = 12$

10)



$$R^2 + 2RR' + R^2 = x^2 + R^2 - 2RR'\left(-R'\right)^2$$

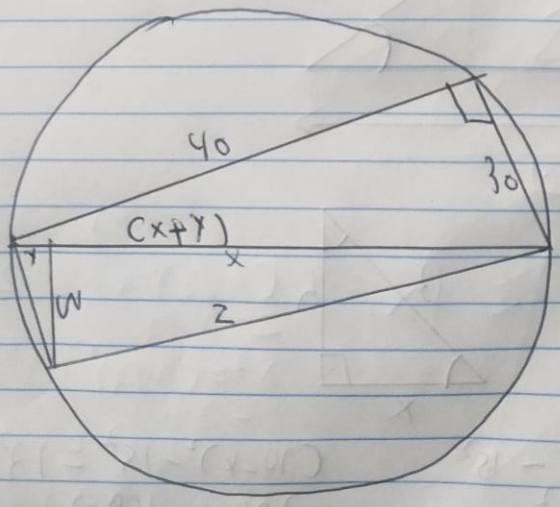
$$x^2 = 2RR' + 2RR'$$

$$x^2 = 4RR'$$

$$x^2 = 2^2 R.R'$$

$$X = 2\sqrt{RR'}$$

11)



$$(x+y)^2 = 30^2 + 40^2$$

$$x + y = 50$$

$$30^2 = (x+y).y$$

$$900 = 50.y$$

$$y = 18$$