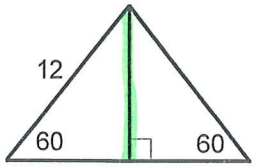
Key

WORKSHEET ON RIGHT TRIANGLES

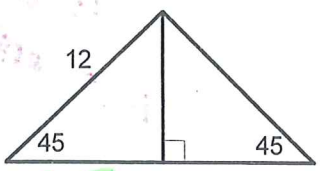
1. Find the length of each altitude.

a. $6\sqrt{3}$



6

b. $6\sqrt{2}$



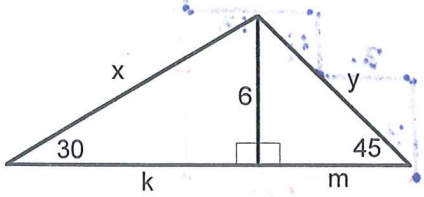
$6\sqrt{2}$

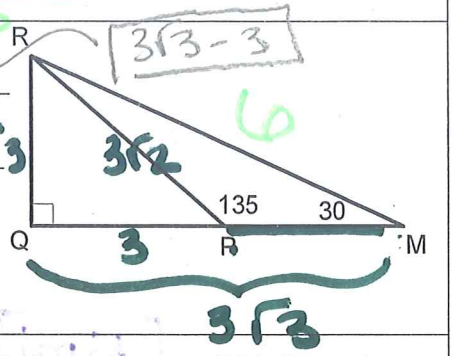
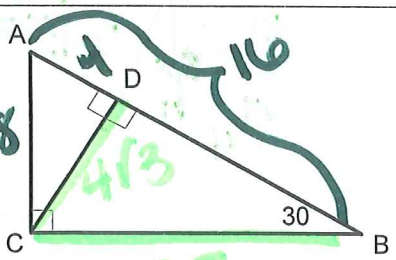
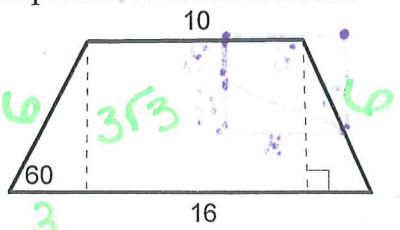
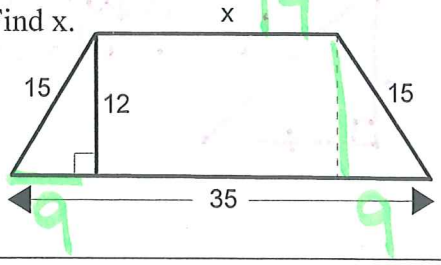
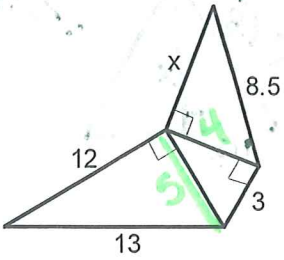
c. 6

2. Find x, y, k, and m.

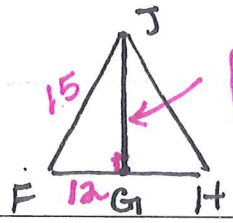
x= 12 y= $6\sqrt{2}$

k= $6\sqrt{3}$ m= 6



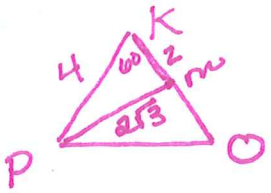
_____3. Find the length of a side of a square whose diagonal measures 20. $10\sqrt{2}$	_____4. Find the length of a side of an equilateral triangle whose altitude measures 27. $18\sqrt{3}$
_____, _____5. A side of a rhombus has length 8, and the measure of one angle of the rhombus is 60. Find the lengths of the diagonals of the rhombus. 8, 60, 4+4=8, $8\sqrt{3}$	6. MR = 6 MP = x PR = $3\sqrt{2}$ PQ = 3 3 
7. BC = $8\sqrt{3}$ AC = 8 AB = 16 CD = $4\sqrt{3}$ Focus Skip 	_____8. Find the perimeter of this isosceles trapezoid. 38=P 
_____9. Find x. 17 	_____10. Find x. ~9.39 

11. If $\overline{JG}$ is the altitude to the base $\overline{FH}$ of isosceles triangle JFH, FJ = 15, and FH = 24, find JG.



JG = 9

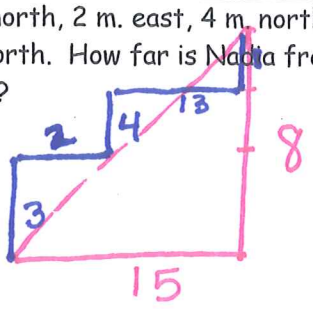
12. $\overline{PM}$ is an altitude of equilateral triangle PKO. If PK = 4, find PM.



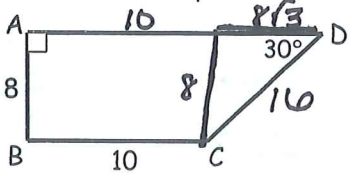
PM = 2√3

13. Nadia skips 3 m. north, 2 m. east, 4 m. north, 13 m. east, and 1 m. north. How far is Nadia from where she started?

17m



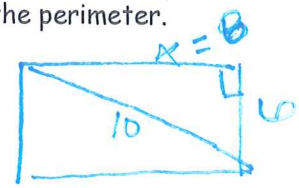
14. Find CD in trapezoid ABCD with bases $\overline{AD}$ and $\overline{BC}$. Find the perimeter of this trapezoid.



CD = 16

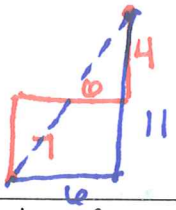
P = 44 + 8√3

15. A rectangle 6 in. wide has a diagonal 10 in. long. Find the perimeter.



P = 28 in

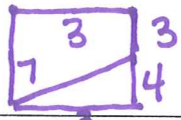
16. A man travels 7 mi. due north, 6 mi. due east, and then 4 mi. due north. Ho far is he from his starting point?



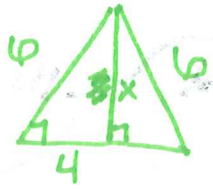
$d = \sqrt{157}$ mi

17. A man travels 7 mi. due north, 3 mi. due east, and then 3 mi. due south. How far is he from his starting point?

5mi



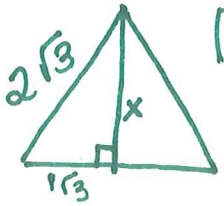
18. The legs of an isosceles triangle are 6 in. long. If the base is 8 in. long, find the length of the altitude to the base.



$x = \sqrt{20}$

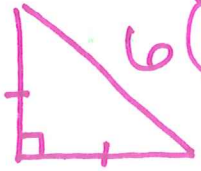
$x = 2\sqrt{5}$ in

19. Find the length of an altitude of an equilateral triangle with a side $2\sqrt{3}$ in. long.



x = 3 in

20. An isosceles right triangle has a 6 in. hypotenuse. Find the length of a leg.



leg = 3√2 in