

CHAPTER 8 REVELTW

Pythagorean Theorem: $a^2 + b^2 = c^2$

Common Pythagorean Triples:

3, 4, 5

8, 15, 17

5, 12, 13

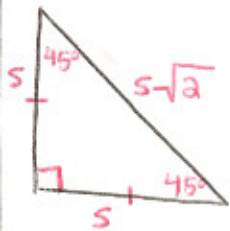
7, 24, 25

OBTUSE: $c^2 > a^2 + b^2$

hypotenuse is bigger

ACUTE: $c^2 < a^2 + b^2$

hypotenuse is smaller

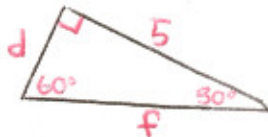


$45^\circ - 45^\circ - 90^\circ$



$30^\circ - 60^\circ - 90^\circ$

EXAMPLE:



① $5 = d\sqrt{3}$

② $d = \frac{5}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{5\sqrt{3}}{3}$

③ $f = 2d$

④ $f = 2 \cdot \frac{5\sqrt{3}}{3} = \frac{10\sqrt{3}}{3}$

sine = $\frac{O}{H}$

Oscar

Had

A

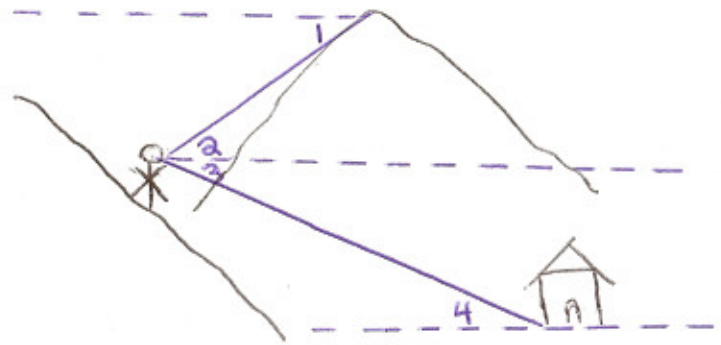
Heap

OF

Apples

cosine = $\frac{A}{H}$

tangent = $\frac{O}{A}$



$\angle 1$ - angle of depression

$\angle 2$ - angle of elevation

$\angle 3$ - angle of depression

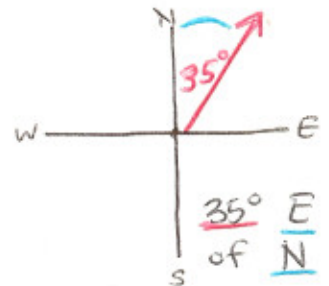
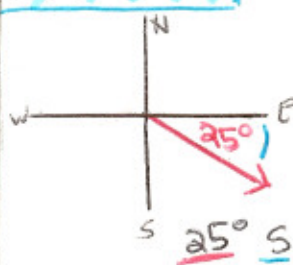
$\angle 4$ - angle of elevation

vector - has magnitude (size) and direction (north, east, etc.)

magnitude - size or distance of a vector

resultant - the sum of 2 vectors

EXAMPLE:



You may need to use the

Distance Formula: $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
to find the magnitude of vectors

EXAMPLE: Adding Vectors

$\vec{a} + \vec{b} = \vec{c}$

① Draw \vec{a} and \vec{b}

② Move one vector to the end of the other

③ Form a triangle to find the resultant

