## Problem Set

"*" indicates challenge question

1. Let $a$ and $b$ be the lengths of the legs of the right triangles below (in cm ), and let $c$ be the length of the hypotenuse (in cm). Solve for the missing length. Simplify your answers.
(a) $a=1, b=\sqrt{3}, c=$ ?
(b) $a=2, b=2, c=$ ?
(c) $a=6, b=?, c=10$
(d) $a=$ ?, $b=24, c=25$
(e) $a=2, b=4, c=$ ?
2. Find the Pythagorean Triple that contains a first number of 17 .
3. Which of the following is NOT a Pythagorean Triple?
(a) 19180181
(b) 35612613
(c) 407686
(d) 123537
4. Which of the following is a Pythagorean Triple?
(a) 7811
(b) 102425
(c) 112
(d) 116061
5. If a bird is on the ground, 5 metres away from the base of a tree, and the bird flies 13 metres to the top of the tree, how tall is the tree?
6. Denver is in a hot air balloon that has just taken off and is now floating 12 metres above its launching point. Regan is standing on the ground, 16 metres away from the launching point. How far apart are Denver and Regan?
