Lesson Plan

Grade 9 Academic Math

Lesson: 4

Unit: Grade 8 Review

Topic: Substitution and Pythagorean Theorem

H homework check: NPM 9 p. 492 - 495

□ note: Grade 9 Review (cont'd)

Substitution – When substituting values for x or y, always show your substitution step. For example,

If
$$x = -3$$
 and $y = 5$, find:

$$2x + y = x^{2} - 3y =$$
a)
$$= 2(-3) + 5$$

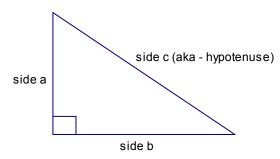
$$= -6 + 5$$

$$= -1$$
b)
$$= (-3)^{2} - 3(5)$$

$$= 9 - 15$$

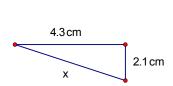
$$= -6$$

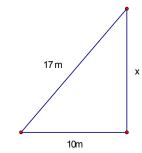
Pythagorean Theorem – Recall the relationship $c^2 = a^2 + b^2$ for all right angled triangles.



For example,

a) b)





$$x^{2} = 4.3^{2} + 2.1^{2}$$

$$x^{2} = 18.49 + 4.41$$

$$x^{2} = 22.9$$

$$x = \sqrt{22.9}$$

$$x = 4.8cm$$

$$17^{2} = 10^{2} + x^{2}$$

$$289 - 100 = x^{2}$$

$$189 = x^{2}$$

$$\sqrt{189} = x$$

$$13.7m = x$$

H homework assignment: NPM 9 p. 36 # 11, p. 66 # 9, 10, 17, 25,