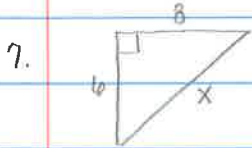


GEOMETRY (SECTION 8.1)

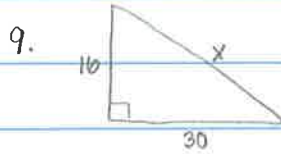


$$6^2 + 8^2 = x^2$$

$$36 + 64 = x^2$$

$$100 = x^2$$

$$x = 10$$

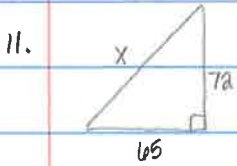


$$16^2 + 30^2 = x^2$$

$$256 + 900 = x^2$$

$$1156 = x^2$$

$$x = 34$$



$$72^2 + 65^2 = x^2$$

$$5184 + 4225 = x^2$$

$$9409 = x^2$$

$$x = 97$$

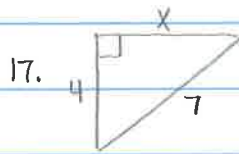
13. $4^2 + 5^2 = 6^2$

$$16 + 25 = 36$$

$$41 \neq 36 \quad \text{NO}$$

15. $15^2 + 20^2 = 25^2$
 $225 + 400 = 625$

$$625 = 625 \quad \text{YES}$$

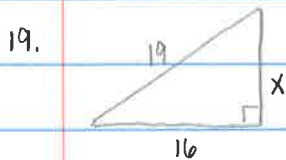


$$4^2 + x^2 = 7^2$$

$$16 + x^2 = 49$$

$$x^2 = 33$$

$$x = \sqrt{33}$$

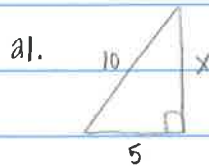


$$16^2 + x^2 = 19^2$$

$$256 + x^2 = 361$$

$$x^2 = 105$$

$$x = \sqrt{105}$$



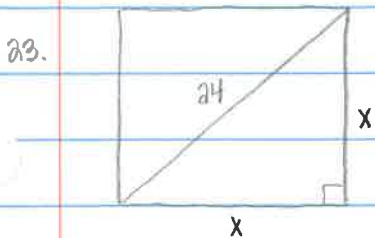
$$5^2 + x^2 = 10^2$$

$$25 + x^2 = 100$$

$$x^2 = 75$$

$$x = \sqrt{75} = 5\sqrt{3}$$

$$x = 5\sqrt{3}$$



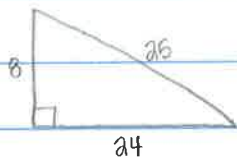
$$x^2 + x^2 = 24^2$$

$$2x^2 = 576$$

$$x^2 = 288$$

$$x = 16.97 \rightarrow 17 \text{ meters}$$

26.



$$8^2 + 24^2 = 26^2$$

$$64 + 576 = 640$$

$$640 \neq 625 \quad \text{NO}$$

27. 4, 5, 6

$$4^2 + 5^2 = 6^2$$

$$16 + 25 = 36$$

$$41 > 36 \quad \text{ACUTE}$$

29. 11, 12, 15

$$11^2 + 12^2 = 15^2$$

$$121 + 144 = 265$$

$$265 > 225 \quad \text{ACUTE}$$

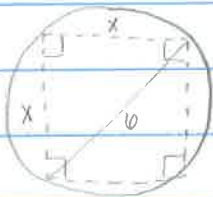
31. 30, 40, 50

$$30^2 + 40^2 = 50^2$$

$$900 + 1600 = 2500$$

$$2500 = 2500 \quad \text{RIGHT}$$

33.



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

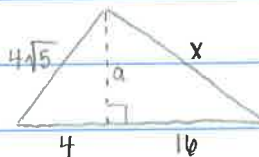
$$2x^2 = 36$$

$$x^2 = 18$$

$$x = \sqrt{18}$$

$$4.2 \text{ in}$$

37.



$$4^2 + a^2 = (4\sqrt{5})^2 \quad 8^2 + 16^2 = x^2$$

$$16 + a^2 = 16 \cdot 5 \quad 64 + 256 = x^2$$

$$16 + a^2 = 80 \quad 320 = x^2$$

$$a^2 = 64$$

$$a = \sqrt{64}$$

$$a = 8$$

$$x = \sqrt{320} = \sqrt{64} \sqrt{5}$$

$$x = 8\sqrt{5}$$

39. 20, 21, x

$$20^2 + 21^2 = x^2$$

$$400 + 441 = x^2$$

$$841 = x^2$$

$$x = \sqrt{841}$$

$$x = 29$$

41. 13, 85, x

~~$$13^2 + 85^2 = x^2$$~~

$$169 + 7225 = x^2$$

$$x^2 = 7394$$

13, x, 85

$$13^2 + x^2 = 85^2$$

$$169 + x^2 = 7225$$

$$x^2 = 7056$$

$$x = 84$$