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NAME _____ DATE _____

PYTHAGORAS: Worksheet 1

Find the missing sides to the nearest tenth. *a* and *b* are legs. *c* is the hypotenuse.

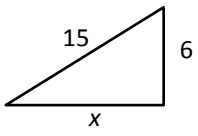
1) $a = 20$ $b = 15$ $c = ?$

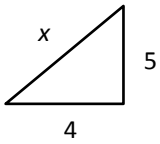
2) $a = 6$ $b = ?$ $c = 10$

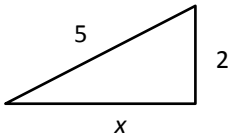
3) $a = 5$ $b = 2$ $c = ?$

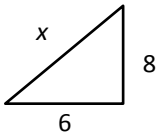
4) $a = ?$ $b = 6$ $c = 9$

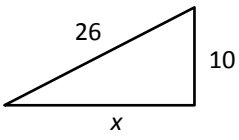
Find the missing side (x) in each right triangle to the nearest tenth. Triangles are not to scale.

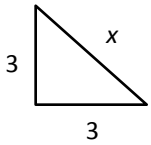
5) 

6) 

7) 

8) 

9) 

10) 

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KEY
PYTHAGORAS: Worksheet 1

Find the missing sides to the nearest tenth. a and b are legs. c is the hypotenuse.

1) $a = 20$ $b = 15$ $c = ?$

$20^2 + 15^2 = c^2$
$400 + 225 = c^2$
$625 = c^2$
$\sqrt{625} = c$
$c = 25$

2) $a = 6$ $b = ?$ $c = 10$

$6^2 + b^2 = 10^2$
$36 + b^2 = 100$
$b^2 = 100 - 36$
$b^2 = 64$
$b = \sqrt{64}$
$b = 8$

3) $a = 5$ $b = 2$ $c = ?$

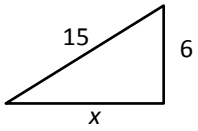
$5^2 + 2^2 = c^2$
$25 + 4 = c^2$
$29 = c^2$
$\sqrt{29} = c$
$c = 5.4$

4) $a = ?$ $b = 6$ $c = 9$

$a^2 + 6^2 = 9^2$
$a^2 + 36 = 81$
$a^2 = 81 - 36$
$a^2 = 45$
$a = \sqrt{45}$
$a = 6.7$

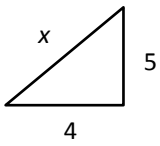
Find the missing side (x) in each right triangle to the nearest tenth. Triangles are not to scale.

5)



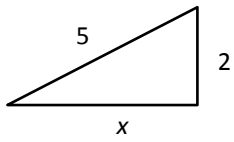
$x^2 + 6^2 = 15^2$
$x^2 + 36 = 225$
$x^2 = 225 - 36$
$x^2 = 189$
$x = \sqrt{189}$
$x = 13.7$

6)



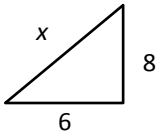
$4^2 + 5^2 = x^2$
$16 + 25 = x^2$
$41 = x^2$
$\sqrt{41} = x$
$x = 6.4$

7)



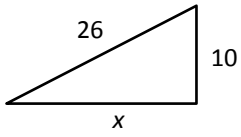
$x^2 + 2^2 = 5^2$
$x^2 + 4 = 25$
$x^2 = 25 - 4$
$x^2 = 21$
$x = \sqrt{21}$
$x = 4.6$

8)



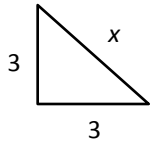
$6^2 + 8^2 = x^2$
$36 + 64 = x^2$
$100 = x^2$
$\sqrt{100} = x$
$x = 10$

9)



$x^2 + 10^2 = 26^2$
$x^2 + 100 = 676$
$x^2 = 676 - 100$
$x^2 = 576$
$x = \sqrt{576}$
$x = 24$

10)



$3^2 + 3^2 = x^2$
$9 + 9 = x^2$
$18 = x^2$
$\sqrt{18} = x$
$x = 4.2$