

NAME _____

DATE _____

PYTHAGORAS: Worksheet 2

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

1) $a = 6$ $b = 8$ $c = ?$

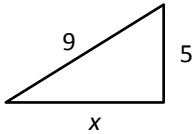
2) $a = 12$ $b = ?$ $c = 13$

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

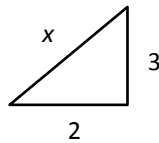
4) $a = ?$ $b = 4$ $c = 8$

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

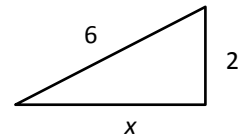
5)



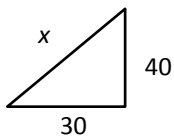
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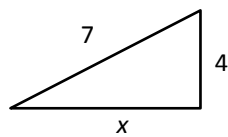
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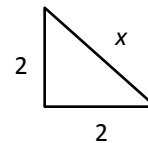
8)



9)



10)



KEY
PYTHAGORAS: Worksheet 2

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

1) $a = 6$ $b = 8$ $c = ?$

$$\begin{aligned} 6^2 + 8^2 &= c^2 \\ 36 + 64 &= c^2 \\ 100 &= c^2 \\ \sqrt{100} &= c \\ c &= 10 \end{aligned}$$

2) $a = 12$ $b = ?$ $c = 13$

$$\begin{aligned} 12^2 + b^2 &= 13^2 \\ 144 + b^2 &= 169 \\ b^2 &= 169 - 144 \\ b^2 &= 25 \\ b &= \sqrt{25} \\ b &= 5 \end{aligned}$$

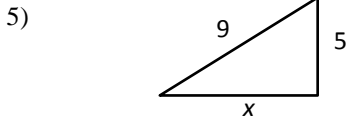
3) $a = 4$ $b = 6$ $c = ?$

$$\begin{aligned} 4^2 + 6^2 &= c^2 \\ 16 + 36 &= c^2 \\ 52 &= c^2 \\ \sqrt{52} &= c \\ c &= 7.2 \end{aligned}$$

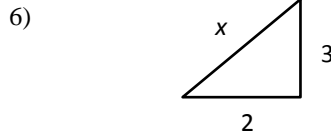
4) $a = ?$ $b = 4$ $c = 8$

$$\begin{aligned} a^2 + 4^2 &= 8^2 \\ a^2 + 16 &= 64 \\ a^2 &= 64 - 16 \\ a^2 &= 48 \\ a &= \sqrt{48} \\ a &= 6.9 \end{aligned}$$

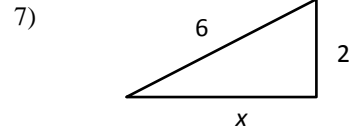
Find the missing side (x) in each right triangle to the nearest tenth. Triangles are not to scale.



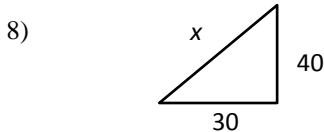
$$\begin{aligned} x^2 + 5^2 &= 9^2 \\ x^2 + 25 &= 81 \\ x^2 &= 81 - 25 \\ x^2 &= 56 \\ x &= \sqrt{56} \\ x &= 7.5 \end{aligned}$$



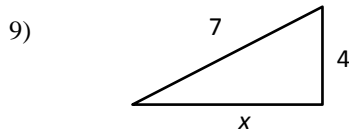
$$\begin{aligned} 2^2 + 3^2 &= x^2 \\ 4 + 9 &= x^2 \\ 13 &= x^2 \\ \sqrt{13} &= x \\ x &= 3.6 \end{aligned}$$



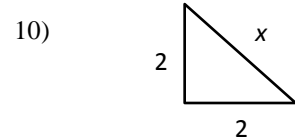
$$\begin{aligned} x^2 + 2^2 &= 6^2 \\ x^2 + 4 &= 36 \\ x^2 &= 36 - 4 \\ x^2 &= 32 \\ x &= \sqrt{32} \\ x &= 5.7 \end{aligned}$$



$$\begin{aligned} 30^2 + 40^2 &= x^2 \\ 900 + 1600 &= x^2 \\ 2500 &= x^2 \\ \sqrt{2500} &= x \\ x &= 50 \end{aligned}$$



$$\begin{aligned} x^2 + 4^2 &= 7^2 \\ x^2 + 16 &= 49 \\ x^2 &= 49 - 16 \\ x^2 &= 33 \\ x &= \sqrt{33} \\ x &= 5.7 \end{aligned}$$



$$\begin{aligned} 2^2 + 2^2 &= x^2 \\ 4 + 4 &= x^2 \\ 8 &= x^2 \\ \sqrt{8} &= x \\ x &= 2.8 \end{aligned}$$