

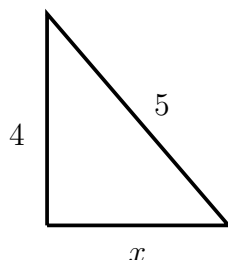
Math 01, Homework 10 on Sections 1.9, 6.1, 6.2, 6.4, 6.5

Write all your working out and answers on your own notepaper - no need to write the questions. Please use lots of space. It is very important that you show clearly any work you had to do to get your answers. Just writing the answer down with no work shown is not enough. Every question is worth 2 points.

The solutions to these first 10 questions are on page 2. Check that you get the same answers. If you don't, then look at your notes or the book or ask me. Only do the last eight questions when you are sure you understand the first ten.

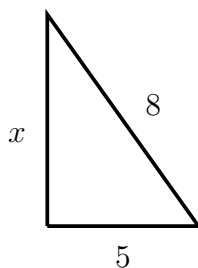
(1) Evaluate $\frac{x-y}{x+y}$ for (a) $x = 3, y = 2$ (b) $x = 2, y = -4$

(2) If a thermometer reads $12^{\circ}C$ (degrees Celsius), find the temperature in $^{\circ}F$ (degrees Fahrenheit) as a decimal. Use the formula $F = \frac{9}{5}C + 32$.

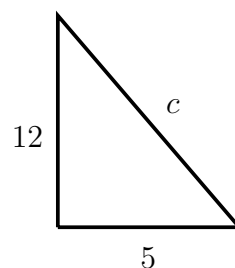


(3) Find x , the length of the missing side:

(4) If the two legs (shorter sides) of a right-angled triangle are of length 8 and 15, find the length of the hypotenuse (the longest side).



(5) Find x :



(6) Find the length c of the hypotenuse in this triangle:

(7) (a) Solve: $x + 3 = 12$ (b) Solve: $3x = 12$

(8) Solve: $4x + 1 = -2$

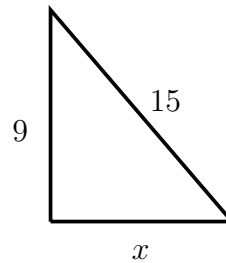
(9) Solve: $2x + 3x - 7 = 4 - 1$

(10) Solve: $4x + 6 = -2x - 12$

Eight more questions. Show clearly all your working out and reasoning.

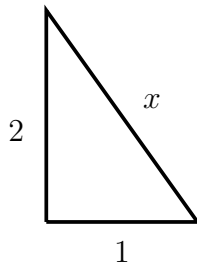
(11) Evaluate $3a^2 - 2b + a - 1$ for (a) $a = 0, b = 1$ (b) $a = -4, b = 3$

(12) If a thermometer reads $-5^\circ C$ (degrees Celsius), find the temperature in $^\circ F$ (degrees Fahrenheit). Use the formula $F = \frac{9}{5}C + 32$.



(13) Find x , the length of the missing side in this triangle:

(14) If the two legs of a right-angled triangle are of length 7 and 24, find the length of the hypotenuse.



(15) Find x :

(16) (a) Solve: $4x = 20$ (b) Solve: $4 + x = 20$

(17) Solve: $3x - 5 = -7$

(18) Solve: $-4x + 8 = 3x - 13$

Answers to questions (1)-(10):

(1) (a) $\frac{1}{5}$ (b) -3

(2) The temperature is $53.6^\circ F$.

(3) $x = 3$

(4) The hypotenuse has length 17

(5) $x = \sqrt{39}$

(6) $c = 13$

(7) (a) $x = 9$ (b) $x = 4$

(8) $x = -\frac{3}{4}$

(9) $x = 2$

(10) $x = -3$