

Math 05, Homework 3 on Sections 3.1 - 3.5

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. All 18 questions are worth 2 points each.

Do these first 10 questions and *check that your answers match the solutions on page 2*. If you don't get the same answers 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) Compute: $5 - (3 \cdot 4)^2$

(2) Calculate: $\frac{-7 - (-1)^3}{-1 - (-3)}$

(3) Evaluate the algebraic expression $x^2 - 5x + 2$ when $x = 3$.

(4) Evaluate $x^2 - y^2$ when $x = -2$ and $y = -3$.

(5) Evaluate $\frac{2x + 3}{2x + 1}$ when $x = -3$.

(6) Evaluate $3y^2 - y - 6$ when $y = 1/2$.

(7) For the function $f(x) = x^3 - 2x^2 + 5$, calculate: (a) $f(0)$, (b) $f(-3)$.

(8) Translate into algebra: "Eight more than twice an unknown quantity"

(9) Translate into algebra: "Five less than half a number"

(10) Translate into algebra: "The difference of twice the width and one third of the length"

Eight more questions¹. Show clearly all your working out and reasoning.

(11) Compute: $7 - (2 \cdot 5)^2$

(12) Calculate: $\frac{-1 - (-1)^5}{1 - (-1)}$

¹questions continue on page 2

(13) Evaluate $x^2 - y^2$ when $x = 4$ and $y = -3$.

(14) Evaluate $\frac{2x + 3}{2x + 1}$ when $x = -1$.

(15) Evaluate $\sqrt{y^2 - 2y + 1}$ when $y = 5$.

(16) For the function $g(x) = x^2 - x - 1$, calculate: (a) $g(0)$, (b) $g(3)$.

(17) Translate into algebra: "Four more than the product of seven and a number squared"

(18) Translate into algebra: "Nine less than one fifth of a number"

Answers to questions (1)-(10):

(1) -139

(2) -3

(3) -4

(4) -5

(5) $\frac{3}{5}$

(6) $-\frac{23}{4}$

(7) (a) 5 , (b) -40

(8) $2x + 8$

(9) $\frac{x}{2} - 5$

(10) $2W - \frac{L}{3}$