

Math 05, Homework 3 on Sections 3.1 - 3.5
Hand in by Wed, Feb 24 at the start of class.

Write all your working out and answers on a separate sheet. It is very important that you show clearly any work you had to do to get the answer. These first ten questions are 2 points each and **the answers are on page 2**.

- (1) Compute: $5 - (3 \cdot 4)^2$
 - (2) Calculate: $\frac{-7 - (-1)^3}{-1 - (-3)}$
 - (3) Evaluate $x^2 - 5x + 2$ 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 $f(x) = x^3 - 2x^2$, 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"
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These next eight¹ questions are 2 points each. Show clearly all your working out and reasoning.

- (11) Compute: $7 - (2 \cdot 5)^2$
- (12) Calculate: $\frac{-1 - (-1)^5}{1 - (-1)}$
- (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 $y = 5$.

¹Three more questions on the next page

(16) For the function $g(x) = x^2 - 2^x$, 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) 0 , (b) -45

(8) $2x + 8$

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

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