

Math 05, Homework 2 on Sections 0.5, 1.1, 1.2, 1.3
due Mon, Sept 21 at the start of class.

Write all your answers on a separate sheet. These first ten questions are 1 point each. It is very important that you show clearly any work you had to do to get the answer. Check your answers match the answers below.

- (1) Calculate: **(a)** $(-6)^2$, **(b)** -6^2 , **(c)** $-(-6)^2$
- (2) Find: $3 \cdot 2^4 - 4 + 4$
- (3) Find: $3 + 4(1 - 4)^3$
- (4) Convert this into algebra: “twice the quantity 3 less than y ”.
- (5) For $a = 3$, $c = 4$ and $d = -2$, evaluate: $2a^2 - 3cd$
- (6) For $a = 3$, $c = 4$ and $d = -2$, evaluate: $-(a - d)(d - c)$
- (7) For $a = 3$, $c = 4$ and $d = -2$, evaluate: $\frac{a - 2c}{d - 2c}$
- (8) Combine like terms: $5xy + 6xy - 3xy$
- (9) Combine like terms: $3x - 5x + 6x^2$
- (10) Simplify: $5p - (-3p + 2q)$
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These next eight questions are 3 points each. Show clearly all your working out and reasoning.

- (11) Calculate: -3^4
- (12) Find: $9 \cdot 6 \div 3 \cdot 3$
- (13) Find: $3 - 4(2 \cdot 2 - 5)^2$
- (14) Convert this into algebra: “the product of 4 with the sum of x and y ”.
- (15) For $x = 2$, $y = -3$ and $z = -4$, evaluate: $xyz - zyx$
- (16) For $x = 2$, $y = -3$ and $z = -4$, evaluate: $3y^2 - (-x - z)$
- (17) Combine like terms: $2 + b^2 + 3b + 4b^2 - 7b$
- (18) Simplify: $p - 3q - (3q - 2p)$

Answers to questions (1)-(10):

(1) (a) 36, (b) -36, (c) -36

(2) 48

(3) -105

(4) $2(y - 3)$

(5) 42

(6) 30

(7) $\frac{1}{2}$

(8) $8xy$

(9) $-2x + 6x^2$

(10) $8p - 2q$