

## Third Set of Homework for Math 05

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**Please note:** You should fully justify your answers.

### Order of operations

1. Evaluate each of the following expressions:

(a)  $(-1)^2$

(b)  $(-1)^9$

(c)  $-3^2$

(d)  $(-2)^2$

(e)  $-(-2)^4$

(f)  $-(-3)^3$

(g)  $-2^5$

(h)  $(-2)^5$

(i)  $(2 \cdot 3)^2$

(j)  $2^2 3^2$

(k)  $(6 + 9) \cdot 4$

(l)  $-3(5 - 8)$

(m)  $6 \cdot 7 + 3 \cdot 2$

(n)  $5 \cdot 9 - 4 \cdot 8$

(o)  $3 \cdot 5^2 - 7$

(p)  $4(-7 + 12)^2$

(q)  $2 + 3(3 - 5)^2$

(r)  $7 - 2(4 - 5)^3$

(s)  $-8 + 2(9 - 7)^2$

(t)  $2 + 8 \div 4 \cdot 2$

(u)  $-2((5 - 7)^2 - (-3 + 1)^3(6 \div 2 \cdot 3))$

(v)  $(-15 - 3^2 + (-3)^2 - 3) \div 9$

(w)  $\frac{(-3) - (-1)}{1 - (-1)}$

(x)  $\sqrt{(-1)^2 - 4(2)(-3)}$

(y)  $\frac{-(-1) + \sqrt{(-1)^2 - 4(1)(-6)}}{2(1)}$