

## Math 101 Answers

1.  $x^{\frac{11}{6}}$
2. a)  $4\sqrt{15}$   
b)  $4 - \sqrt{3}$   
c)  $\frac{11}{4} + \frac{5}{4}\sqrt{5}$
3.  $p = 4, q = 2$
4. a)  $x = 5, x = 1$   
b)  $x = \frac{5}{4} \pm \frac{1}{4}\sqrt{17}$
5.  $x = 4, x = \frac{16}{5}, y = -1, y = \frac{-13}{5}$
6. a)  $x \leq \frac{3}{2}$   
b).  $x < -14$  or  $x > 2$
7. -18
8. *Triangle OPA = 5 units<sup>2</sup>*
9.  $2p + 3\sqrt{pq} - 2q$
10. a).  $3(x - 2)^2 - 5$   
b). (2, -5)
11.  $2(4n^3 + 6n^2 - n) - 3$  note: there are alternative solutions. Your teacher will check this in September if you are unsure.
12. a).  $AB = 3\sqrt{5}$  or  $\sqrt{45}$  units  
b). *Line 2*  $y = 2x$   
c).  $(\frac{18}{5}, \frac{6}{5})$