

**Business PreCalculus**      MATH 1643 Section 004, Spring 2014  
**Homework 22**

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- 1-** Assume that  $y$  varies directly as the square of  $x$ , and  $y = 64$  when  $x = 2$ . Find  $y$  when  $x = 5$ .
- 2-** Assume that  $y$  varies inversely as the cube of  $x$ , and  $y = 1$  when  $x = 2$ . Find  $y$  when  $x = 4$ .
- 3-** Assume that  $z$  varies jointly as  $u$  and the cube of  $v$  and inversely as the square of  $w$ , and  $z = 9$  when  $u = 4$ ,  $v = 3$  and  $w = 2$ . Find  $w$  when  $u = 27$ ,  $v = 2$  and  $z = 8$ .
- 4-** Assume that  $P$  varies jointly as  $T$  and the square of  $Q$ , and  $P = 36$  when  $T = 17$  and  $Q = 6$ . Find  $P$  when  $T = 4$  and  $Q = 9$ .