Question #16662 1.)If y varies directly as x and $y = 56$ when$x = 8$, find y when $x = 64$ 2.)Suppose y varies jointly as x and z. Find y when $x = 18$ and $z = 10$,if $y = 111$ when $x = 4$ and $z = 11$

Solution. 1) implies that $y = kx$, $56 = 7k$, so $k = 8$, thus $y = 8x$ and $y = 8 \cdot 64 = 512$.
2)$y = k \cdot x \cdot z$ and $111 = k \cdot 4 \cdot 11$ or $k = 111/44$. Thus $y = 18 \cdot 10 \cdot 111/44$, so $y = 454\frac{1}{11}$.