

The quadratic formula is $x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

7a. In this equation $a=1$, $b=3$, $c=-2$. Put it into the formula:

$$x_{1,2} = \frac{-3 \pm \sqrt{3^2 - 4 \cdot 1 \cdot (-2)}}{2 \cdot 1} = \frac{-3 \pm \sqrt{17}}{2}$$

Answer: $x_{1,2} = \frac{-3 \pm \sqrt{17}}{2}$

7b. . In this equation $a=7$, $b=-2$, $c=5$. Put it into the formula:

$$x_{1,2} = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \cdot 7 \cdot 5}}{2 \cdot 7} = \frac{2 \pm \sqrt{4 - 140}}{14}$$

We see that discriminant $D = b^2 - 4ac < 0$, then there are not real solutions

Complex solution: $x_{1,2} = \frac{2 \pm \sqrt{4 - 140}}{14} = \frac{1 \pm i\sqrt{34}}{7}$