

Apply radical rule: $\sqrt{a^n} = a$

$$\sqrt{5^2} = 5$$

$$= \frac{9+5}{14}$$

Add $9+5 = 14$

$$= \frac{14}{14}$$

Apply rule $\frac{a}{a} = 1$

$$n = \frac{-(-9 - \sqrt{(-9)^2 - 4 \times 7 \times 2})}{2 \times 7} \div \frac{2}{7}$$

$$= \frac{-(-9 - \sqrt{(-9)^2 - 4 \times 7 \times 2})}{2 \times 7}$$

Apply rule: $-(-a) = a$ $= \frac{9 - \sqrt{(-9)^2 - 4 \times 7 \times 2}}{2 \times 7}$

$$9 - \sqrt{(-9)^2 - 4 \times 7 \times 2} = 9 - \sqrt{25}$$

$$= \frac{9 - \sqrt{25}}{2 \times 7}$$

$$\frac{9 - \sqrt{25}}{14}$$

$$\sqrt{25} = 5$$

Factor $25 = 5^2$

$$= \sqrt{5^2}$$

Apply radical rule $\sqrt{a^n} = a$

$$\sqrt{5^2} = 5$$

$$\frac{9-5}{14} = \frac{4}{14}$$

Cancel the common factor 2

$$= \frac{2}{7}$$

Final solutions to the equation are

$$(n=1, n=\frac{2}{7})$$

~~$Q = \frac{1}{2} + \frac{1}{2}b - \frac{1}{2}ut$~~
unimodal
bl