

$$21(n-4) + 21n = 10n(n-4)$$

$$21n - 84 + 21n = 10n^2 - 40n$$

$$42n - 84 = 10n^2 - 40n$$

$$0 = 10n^2 - 82n + 84$$

$$0 = 2(5n^2 - 41n + 42)$$

$$0 = 2(5n-6)(n-7)$$

$$5n-6=0 \quad \text{or} \quad n-7=0$$

$$5n=6 \qquad n=7$$

$$n = \frac{6}{5}$$