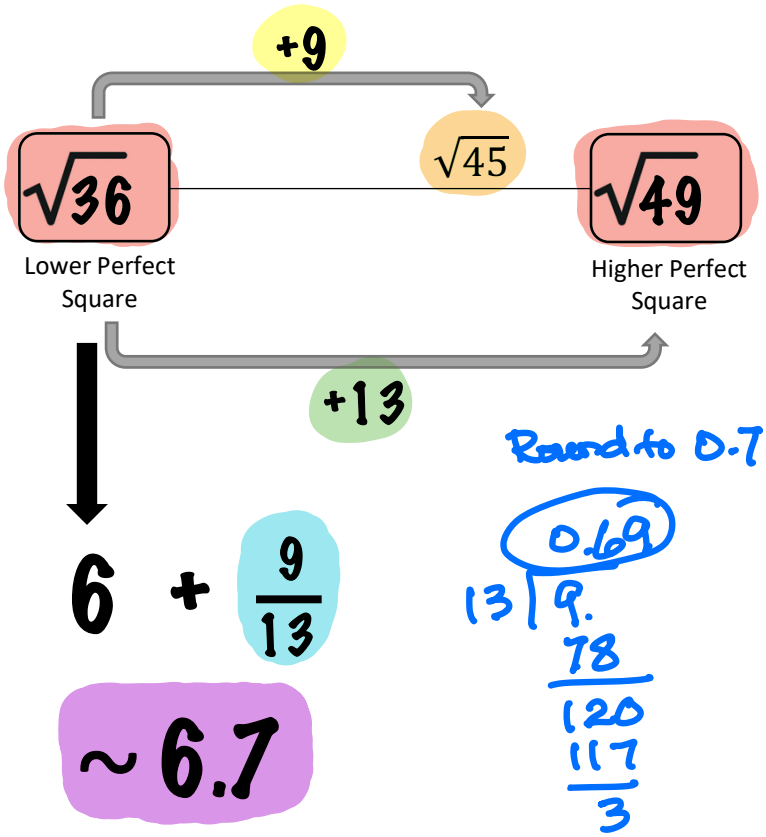
Name Key _____ Period _____ Date _____

# Approximating Square Roots to the Nearest Tenth

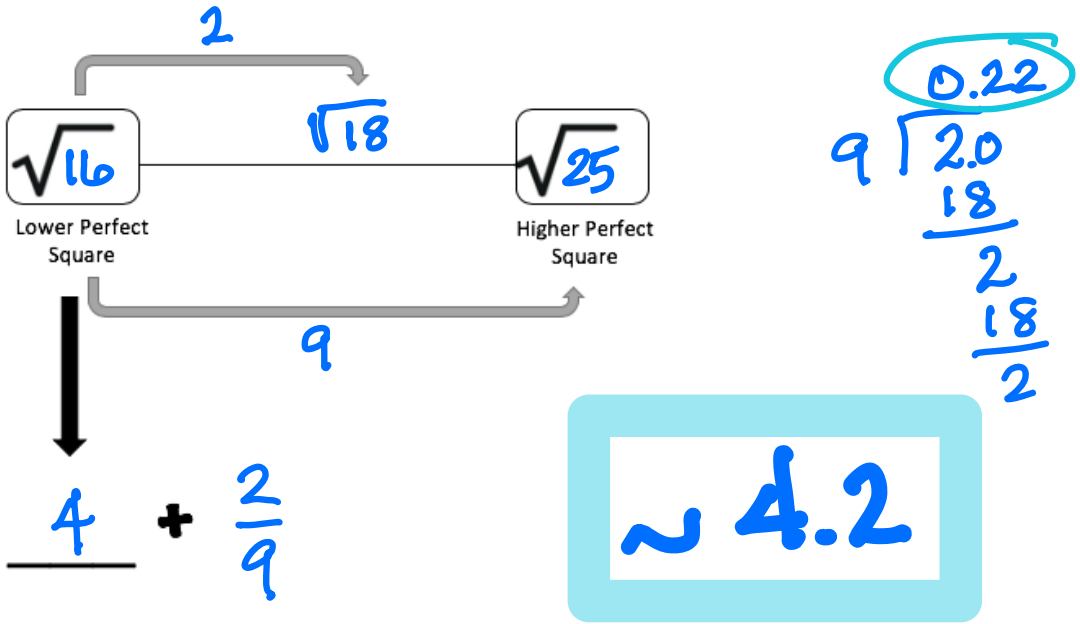
Approximate $\sqrt{45}$ to the nearest tenth.



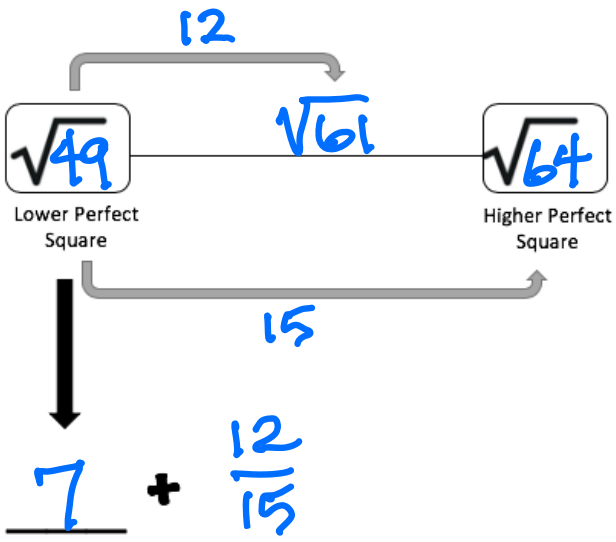

1. Find the perfect squares above and below your target number.
2. Place your target number on the number line between the perfect squares.
3. Calculate the distance between the lower perfect square and your target number.
4. Calculate the distance between the lower perfect square and the higher perfect square.
5. Find the ratio of the distance the target number is between the two perfect squares.
6. Do the division to make the ratio a decimal.
7. Add the decimal to the square root of the lower perfect square.

**Try your own:**

Approximate $\sqrt{18}$ to the nearest tenth.



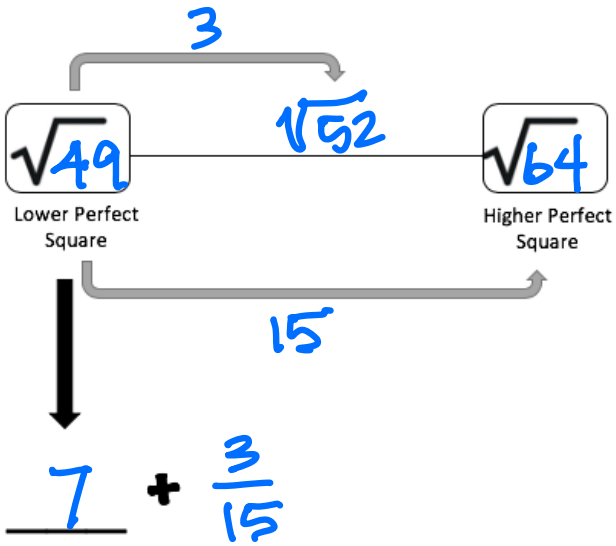
Approximate $\sqrt{61}$ to the nearest tenth.




$\frac{12}{15} = \frac{4}{5} = \frac{8}{10} = 0.8$

$\sim 7.8$

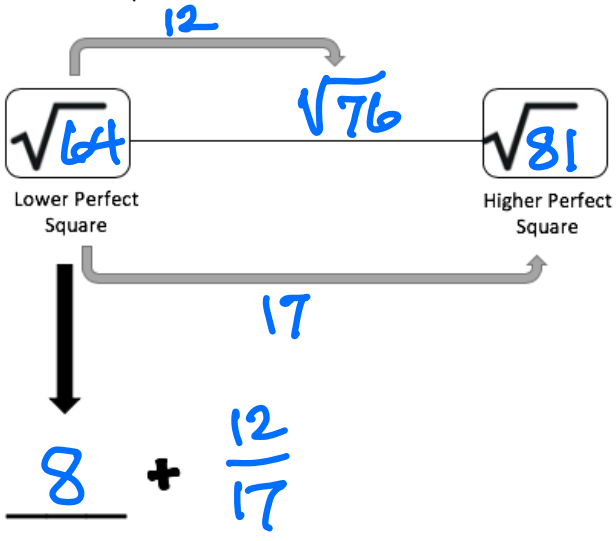
Approximate $\sqrt{52}$ to the nearest tenth.




$\frac{3}{15} = \frac{1}{5} = \frac{2}{10} = 0.2$

$\sim 7.2$

Approximate $\sqrt{76}$ to the nearest tenth.




$17 \overline{)12.0}$ → $0.70$, $119$, $10$

$\sim 8.7$