

Name _____

Common Core Standard 8.NS.A.2 – Number System

 Compare $\sqrt{5}$ and $\sqrt{7}$. Be sure to explain your answer.

A $\sqrt{5} > \sqrt{7}$

B $\sqrt{5} < \sqrt{7}$

C $\sqrt{5} = \sqrt{7}$

D $\sqrt{5} \geq \sqrt{7}$

Common Core Standard 8.NS.A.2 – Number System

 Between which whole numbers on a number line is the value of $\sqrt{22}$. Be sure to explain your answer.

A 4 and 5

B 5 and 6

C 16 and 25

D 20 and 25

Common Core Standard 8.NS.A.2 – Number System

 Estimate the value of $\sqrt{14}$ to the nearest tenth. Hint: choose decimals between 3 and 4, and calculate the square of each number to determine which one is the best estimate. Be sure to show your work.

A 3.8

B 3.7

C 3.6

D 3.5

Name _____

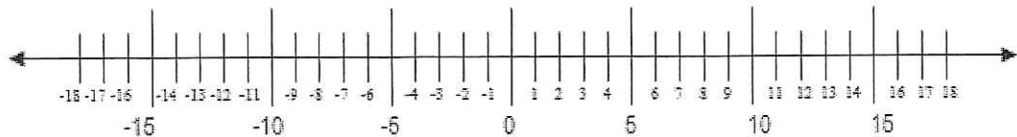
Common Core Standard 8.NS.A.2 – Number System

Estimate the square root to the nearest tenth: $\sqrt{233}$. Be sure to show your work.

- A 13.2
- B 14.2
- C 15.2
- D 12.2

Common Core Standard 8.NS.A.2 – Number System

Estimate the location of $\sqrt{112}$ on the number line. Then, plot and label a point for your estimate. Estimate to the nearest tenth.



- A 10.9
- B 10.2
- C 11.2
- D 10.5

Common Core Standard 8.NS.A.2 – Number System

Estimate the square root to the nearest hundredth: $\sqrt{70}$. Be sure to show your work.

- A 8.16
- B 8.36
- C 8.76
- D 8.96

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Estimate the square root to the nearest tenth: $\sqrt{200}$. Be sure to show your work.

A 14.7

B 14.5

C 14.3

D 14.1

Common Core Standard 8.NS.A.2 – Number System

Simplify the expression. Be sure to show your work.

$$30\sqrt{6} + 7\sqrt{6} - 20\sqrt{6} =$$

A $17\sqrt{6}$

B 102

C $3\sqrt{6}$ D $57\sqrt{6}$

Common Core Standard 8.NS.A.2 – Number System

Simplify the expression. Be sure to show your work.

$$(18\sqrt{17} \div 3\sqrt{17}) + 15\sqrt{17} - \sqrt{17} =$$

A $6\sqrt{17} + 14\sqrt{17}$ B $20\sqrt{17}$ C $6 + 14\sqrt{17}$ D $\frac{6}{\sqrt{17}} + \frac{14}{\sqrt{17}}$

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 Solve to the nearest tenth. Be sure to show your work.

$$(15\sqrt{8} - 12\sqrt{8}) - (9\sqrt{8} - 7\sqrt{8}) =$$

A 2.5

B 1.9

C 3.1

D 2.8

Common Core Standard 8.NS.A.2 – Number System

 Simplify the expression. Be sure to show your work.

$$\frac{12\sqrt{6}}{\sqrt{54}} - \frac{7\sqrt{6}}{3\sqrt{6}} - \frac{20\sqrt{6}}{14\sqrt{12}} =$$

A $\frac{5}{3} - \frac{5\sqrt{2}}{7}$

B $\frac{7}{3} - \frac{6\sqrt{5}}{7}$

C $\frac{4}{3} - \frac{3\sqrt{3}}{7}$

D $\frac{8}{3} - \frac{4\sqrt{6}}{7}$

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 Solve to the nearest hundredth. Be sure to show your work.

$$\frac{1}{3} \pi \times \left(\frac{12\sqrt{8}}{\sqrt{32}} \right) =$$

A 5.78

B 6.28

C 6.37

D 6.45