

9/25/26

Estimating Square Roots Worksheet - Notes

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A perfect square is

$1^2 =$ 1	$2^2 =$ 4	$3^2 =$ 9	$4^2 =$ 16	$5^2 =$ 25	$6^2 =$ 36	$7^2 =$ 49	$8^2 =$ 64
$9^2 =$ 81	$10^2 =$ 100	$11^2 =$ 121	$12^2 =$ 144	$13^2 =$ 169	$14^2 =$ 196	$15^2 =$ 225	$16^2 =$ 256

A square root is

$\sqrt{196} =$ 14	$\sqrt{256} =$ 16	$\sqrt{169} =$ 13
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For an integer that is not a perfect square you can estimate a square root.Example 1: What are the two whole numbers that are closest to $\sqrt{8}$?

To solve this, you just need to find the two perfect squares that are directly above and below the number.
(Use a number line if you need to)

Example 2: What are the two whole numbers that are closest to $\sqrt{135}$? 11 - 12Example 3: What are the two whole numbers that are closest to $\sqrt{200}$? 14 - 15Example 4: What are the two whole numbers that are closest to $\sqrt{192}$? 13 - 14Example 5: What are the two whole numbers that are closest to $\sqrt{37}$? 6 - 7

Estimating Square Roots Worksheet – Homework

1. What are the two whole numbers closest to $\sqrt{162}$? $12-13$ $1 \times 1 = 1$

2. What are the two whole numbers closest to $\sqrt{95}$? $9-10$ $2 \times 2 = 4$
 $3 \times 3 = 9$

3. What are the two whole numbers closest to $\sqrt{74}$? $8-9$ $4 \times 4 = 16$
 $5 \times 5 = 25$

4. What are the two whole numbers closest to $\sqrt{28}$? $5-6$ $6 \times 6 = 36$
 $7 \times 7 = 49$

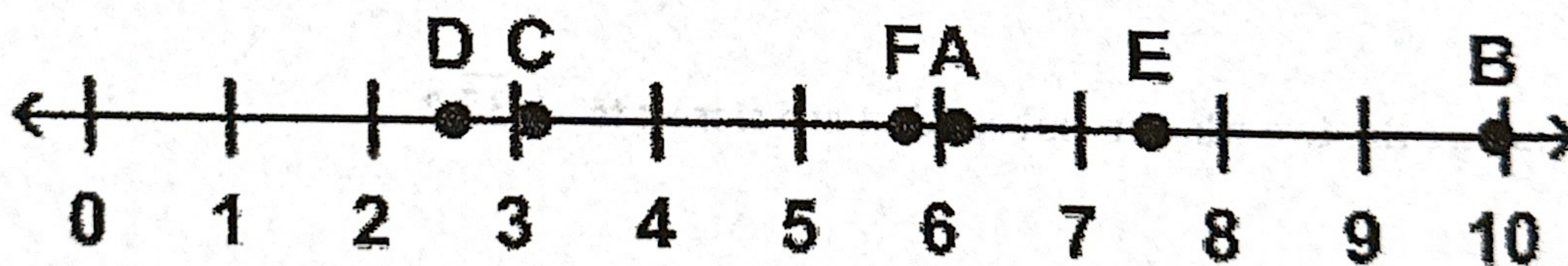
5. What are the two whole numbers closest to $\sqrt{60}$? $7-8$ $8 \times 8 = 64$
 $9 \times 9 = 81$

6. What are the two whole numbers closest to $\sqrt{19}$? $4-5$ $10 \times 10 = 100$
 $11 \times 11 = 121$

$12 \times 12 = 144$
 $13 \times 13 = 169$
 $14 \times 14 = 196$

$15 \times 15 = 225$

7. Which letter on the number line below corresponds to each square root?



$\sqrt{56}$ 7E

$\sqrt{10}$ 3C

$\sqrt{39}$ 6A

$\sqrt{7}$ 2D

$\sqrt{32}$ F

$\sqrt{98}$ B