

Warm-Up

1. Which fraction is equivalent to $0.\overline{12}$?

a. $\frac{12}{99}$

c. $\frac{1}{2}$

b. $\frac{1}{12}$

d. $\frac{1}{11}$

2. Classify the following numbers as rational or irrational. π 11 $\sqrt{11}$ $\frac{1}{11}$ $0.\overline{11}$ $0.12345678\dots$

3. $(5^2)(2^{-4})$

4. $8^7 \div 8^7$

5. Solve the equation: $x^2 = 9$

Perfect Square/Cube Quiz
Out of 30 points



How do you estimate and compare irrational numbers?

Estimate the value of $\sqrt{2}$ to the nearest hundredth

Estimate the value of $\sqrt{7}$ to the nearest hundredth

Compare. Write $<$, $>$, or $=$

Remember:

$>$ Greater Than

$<$ Less Than

$=$ Equal to

$$\sqrt{3} + 5 \bigcirc 3 + \sqrt{5}$$

$$10 + \sqrt{2} \bigcirc \sqrt{10} + 2$$

Compare. Write $<$, $>$, or $=$

Remember:

$>$ Greater Than

$<$ Less Than

$=$ Equal to

$$\sqrt{2} + 4 \bigcirc 2 + \sqrt{4}$$

$$12 + \sqrt{6} \bigcirc \sqrt{12} + 6$$

Order $\sqrt{3}$, π , and 1.5 from least to greatest.

Order $\sqrt{3}$, 2, 1.34, and $\frac{10}{7}$ from least to greatest.

Order 4 , $3\frac{3}{5}$, 10 , and $\sqrt{14}$ from least to greatest.

A square picture frame has an area of 64 square inches. What is the length of each side of the frame?

A cube has a volume of 27 cubic centimeters. What is the length of each edge of the cube?

Approximate each irrational number to the nearest tenth w/out a calculator.

1. $\sqrt{34}$

2. $\sqrt{82}$

3. $\sqrt{45}$

4. $\sqrt{104}$

Approximate each irrational number to the nearest hundredth without using a calculator.

5. $\sqrt{71}$

6. $\sqrt{19}$

7. $\sqrt{24}$

8. $\sqrt{41}$

Compare. Write $<$, $>$, or $=$.

9. $\sqrt{3} + 2$ $\sqrt{2} + 3$

10. $\sqrt{11} + 15$ $\sqrt{15} + 11$

11. $\sqrt{6} + 5$ $6 + \sqrt{5}$

12. $\sqrt{9} + 3$ $9 + \sqrt{3}$

13. $\sqrt{15} - 3$ $-2 + \sqrt{5}$

14. $10 - \sqrt{8}$ $12 - \sqrt{2}$

15. $\sqrt{7} + 1$ $\sqrt{10} - 1$

16. $\sqrt{12} + 3$ $3 + \sqrt{11}$

Order the numbers from least to greatest.

17. $\sqrt{7}, \frac{\sqrt{8}}{2}, 2$

18. $\sqrt{10}, \pi, 3.5$

19. $1.5, \frac{\sqrt{12}}{3}, \sqrt{3}$

20. $2\sqrt{7}, \sqrt{24}, 2\pi$

Approximate each irrational number to the nearest tenth w/out a calculator.

1. $\sqrt{34}$

5.8

2. $\sqrt{82}$

9.1

3. $\sqrt{45}$

6.7

4. $\sqrt{104}$

10.2

Approximate each irrational number to the nearest hundredth without using a calculator.

5. $\sqrt{71}$

8.43

6. $\sqrt{19}$

4.36

7. $\sqrt{24}$

4.89

8. $\sqrt{41}$

6.40

Compare. Write $<$, $>$, or $=$.

9. $\sqrt{3} + 2 < \sqrt{2} + 3$

10. $\sqrt{11} + 15 > \sqrt{15} + 11$

11. $\sqrt{6} + 5 > 6 + \sqrt{5}$

12. $\sqrt{9} + 3 < 9 + \sqrt{3}$

13. $\sqrt{15} - 3 > -2 + \sqrt{5}$

14. $10 - \sqrt{8} < 12 - \sqrt{2}$

15. $\sqrt{7} + 1 > \sqrt{10} - 1$

16. $\sqrt{12} + 3 > 3 + \sqrt{11}$

Order the numbers from least to greatest.

17. $\sqrt{7}, \frac{\sqrt{8}}{2}, 2$

18. $\sqrt{10}, \pi, 3.5$

19. $1.5, \frac{\sqrt{12}}{3}, \sqrt{3}$

20. $2\sqrt{7}, \sqrt{24}, 2\pi$
