MATH 9 Rational Numbers Test (2) (Key)

Use >, <, or = to make each statement true.

1. $-0.86 \bigcirc -0.84$ (<)

2. $-1\frac{3}{10} \bigcirc -\left(\frac{-13}{-10}\right)$ (=)

$-1\frac{3}{10}$

3. $-\frac{2}{5} \bigcirc -2\frac{7}{8}$ (>)

4. $-\left(\frac{-12}{-5}\right) \bigcirc -2.4$ (=)

$-2\frac{2}{5}$

-2.4

Calculate

5. $-0.85 \overset{+}{-} (\overset{+}{-}2.34) = 1.49$

6. $-3.77 \div (-2.9) = 1.3$

7. $-0.25\,(-0.031) = 0.00775$

$-5.3 + -1.2$

8. $-5.3 + 2.4\left[7.8 + \overset{-0.5}{(-8.3)}\right] = -6.5$

9. One evening in Kamloops, the temperature decreased from 2.4°C to −3.2°C in 3.5 hours. What was the average change in temperature?

$5.6 / 3.5$ → 1.6°C average change

Solve

10. $-3\frac{3}{5} + 1\frac{7}{10} =$

$-3\frac{6}{10} + 1\frac{7}{10}$

$-\frac{36}{10} + \frac{17}{10} = -\frac{19}{10} = -1\frac{9}{10}$

11. $-\frac{1}{2}\left(-\frac{8}{9}\right) = \frac{8}{18} \rightarrow \frac{4}{9}$

12. $-\frac{5}{7} \div \frac{7}{8} = -\frac{5}{7} \times \frac{8}{7}$ $-\frac{40}{49}$

13. Without using a calculator, determine if each rational number is a perfect square. If yes, indicate the square root in the same form as the question.

a) $\frac{36}{81}$ $\frac{6}{9}$ Yes

b) 1.7 $\frac{17}{10}$ NO

c) 0.81 $\frac{81}{100} \rightarrow \frac{9}{10}$ yes

14. Determine the number with a squareroot of 0.19.

0.0361

15. A square has an area of $1.69\ m^2$. What is the perimeter of the square?

1.3

1.3 x 4

5.2m

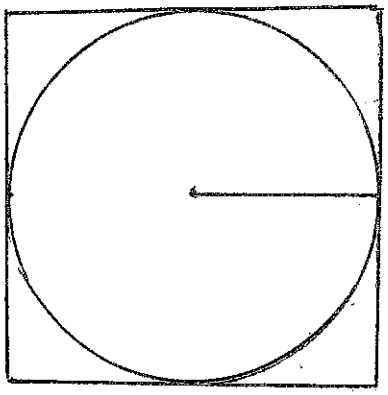
16. Using the $\sqrt{49}$ and $\sqrt{64}$, estimate the $\sqrt{51}$ to the nearest tenth. Show your work (Do not use a calculator).

$\sqrt{49}$ 7 — $\sqrt{56.5}$ 7.5 halfway — $\sqrt{64}$ 8

$\frac{15}{2} = 7.5$

Est. 7.1 or 7.2

17.



A square has an area of $225\ cm^2$. What is the radius of the largest circle that can fit inside the square?

Radius = 7.5 cm