

REAL NUMBERS TEAM CHALLENGE

TEAMS OF 3 • EVERY STUDENT PLAYS EVERY ROUND

TEAM SETUP

3 students per team
Each student gets their own
quarter-sheet

UP TO 16 ROUNDS

Pass out one quarter-sheet to
each student
Keep cards face down until
“START!”

ROUND SCORE

1 point for each correct
student
+1 bonus if all 3 are correct

PASS OUT → FLIP → SOLVE → SHOW → SCORE

Start each round: cards face down, then flip on “START!”

HOW EACH ROUND WORKS

1

Teacher passes out one quarter-sheet to each student.

2

Keep the quarter-sheet face down until the teacher says "START."

3

On "START," everyone flips at the same time and solves independently.

4

On "3, 2, 1, SHOW," all 3 students reveal answers at the same time.

5

Count points, record the round score, and move to the next card.

No peeking and no talking before the flip. Everyone must have an answer.

RULES + SCORING

RULES

- Keep cards face down until the teacher says “START.”
- Every student writes an answer every round.
- All 3 students flip and start at the same time, then show at the same time.
- Teams may compare answers only AFTER the reveal.
- Stop whenever class time runs out — you do not have to finish all 16.

SCORING

1 POINT for EACH student who is correct

+1 BONUS if ALL 3 students are correct

4 POINTS MAX PER ROUND

Student 1	Student 2	Student 3	Score
✓	✓	✗	2

QUESTION 1

Which number is between 425% and $\sqrt{20}$?

A. 4.18

B. $43/10$

C. 0.46×10^1

D. 449%

QUESTION 2

Which two consecutive integers would $\sqrt{242}$ fall between?

A. 14 and 15

B. 16 and 17

C. 15 and 17

D. 15 and 16

QUESTION 3

Which value is closest to 0?

A. $-\sqrt{16}$

B. $\sqrt{17}$

C. 410%

D. -4.05

E. 4.2×10^0

QUESTION 4

Place the five real numbers in order from greatest to least.

$\sqrt{87}$

2.9π

9.05

902%

$89/10$

1

2

3

4

5

QUESTION 5

Plot $\sqrt{74}$ on the number line to the nearest tenth.

Round first, then place the point.



QUESTION 6

Select EACH number that does NOT fit between 2.15 and 230%.

A. $2 \frac{1}{3}$

B. 218%

C. $\sqrt{5}$

D. 0.227×10^1

E. 2.08

QUESTION 7

Which list shows the real numbers in order from least to greatest?

A. $-\sqrt{90}$, -9.6 , -3π , $-9 \frac{2}{5}$

B. -9.6 , -3π , $-\sqrt{90}$, $-9 \frac{2}{5}$

C. -9.6 , $-\sqrt{90}$, -3π , $-9 \frac{2}{5}$

D. $-9 \frac{2}{5}$, -3π , $-\sqrt{90}$, -9.6

QUESTION 8

Justify why $-\sqrt{42}$ must be located between -6.5 and -6.4 on a number line. Include the rational approximations used in your justification.

A. $-\sqrt{42}$ is located between -6.5 and -6.4 since $-(6.4)^2 = -40.96$ and $-(6.4)^2 = -40.96$.

B. $-\sqrt{42}$ is located between -6.5 and -6.4 since $(6.5)^2 = -42.25$ and $(6.4)^2 = -40.96$.

C. $-\sqrt{42}$ is located between -6.5 and -6.4 since $-(6.5)^2 = 42.25$ and $-(6.4)^2 = 40.96$.

D. $-\sqrt{42}$ is located between -6.5 and -6.4 since $-(6.5)^2 = -42.25$ and $-(6.4)^2 = -40.96$.

QUESTION 9

Plot the four numbers on the number line.

$$-10.7$$

$$8 \times 10^{-1}$$

$$-\sqrt{49}$$

$$25/2$$



QUESTION 10

Select ALL values greater than 1.6.

A. $\sqrt{2.5}$

B. 163%

C. 1.61

D. $8/5$

E. 1.59×10^0

QUESTION 11

Which list shows the real numbers in order from greatest to least?

A. $\sqrt{19600}$, $277/2$, 44π , 138.2

B. $\sqrt{19600}$, 44π , $277/2$, 138.2

C. $277/2$, $\sqrt{19600}$, 44π , 138.2

D. 44π , $277/2$, 138.2 , $\sqrt{19600}$

QUESTION 12

Which pair of numbers are BOTH between 6 and 7?

A. $\sqrt{35}$ and $\sqrt{46}$

B. $\sqrt{38}$ and $\sqrt{50}$

C. $\sqrt{40}$ and $\sqrt{47}$

D. $\sqrt{36}$ and $\sqrt{48}$

QUESTION 13

Given the numbers -3.8 , $\sqrt{144}$, $-\sqrt{130}$, 0 , and $59/10$, when ordered from least to greatest, justify why $-\sqrt{130}$ would be placed to the right of -12 on the number line.

- A. $-\sqrt{130}$ would be placed to the right of -12 because -12 is larger than $-\sqrt{130}$.**
- B. $-\sqrt{130}$ would be placed to the right of -12 because -12 is less than $-\sqrt{130}$.**
- C. $-\sqrt{130}$ would be placed to the right of -12 because -12 is closer to 0 than $-\sqrt{130}$.**
- D. $-\sqrt{130}$ would be placed to the right of -12 because -12 is larger than or equal to $-\sqrt{130}$.**

QUESTION 14

What is $\sqrt{31}$ rounded to the nearest hundredth?

A. 5.47

B. 5.56

C. 5.60

D. 5.57

QUESTION 15

Which comparison is true?

A. $7/20 > 36\%$

B. $0.42 \times 10^0 < 41\%$

C. $\sqrt{7} > 2.6$

D. $\pi < 3.14$

QUESTION 16

Select EACH number that is between 475% and 5.8×10^0 .

A. 4.70

B. 5.15

C. $5 \frac{7}{8}$

D. 0.54×10^1

E. $\sqrt{34}$

