

$$2x + 5 = 17$$

 π  $\sqrt{x}$

REAL NUMBER ORDERING CARDS

$$y = mx + b$$



Grade 8 • Virginia SOL 8.NS.1c



75
Cards



15
A-O
Families



Dry-
Erase
Ready

THIS RESOURCE INCLUDES:



Reusable, student-friendly cards
with clear directions



Answer key for all cards



Heading quick index for
fast reference

Build
CONFIDENCE
Master
ORDERING
of Real Numbers!



Math Made Simple

TEACHER DIRECTIONS

One deck • two ways to practice • laminate once and reuse

ACTIVITY 1: SAME HEADING

- 1 Choose a heading such as FRACTION, DECIMAL, PERCENT, or SCIENTIFIC NOTATION.
- 2 Pull five cards with that same heading. Ignore family letters/colors.
- 3 Students convert or approximate as needed in the blank work boxes.
- 4 Order the five values least to greatest or greatest to least.

ACTIVITY 2: SAME FAMILY

- 1 Give students all five number cards from one family (A-O).
- 2 Each family mixes five real-number representations.
- 3 Students convert or approximate directly on laminated cards.
- 4 Order all five cards and justify the order.

PRINT + PREP

Print at 100% / Actual Size. Cut on card edges. Laminate for dry-erase use.

Each printed family page contains 5 number cards + 1 matching family divider.

PI appears in mixed-family challenges; there are fewer than five PI cards for same-heading use.

10 WAYS TO USE THIS DECK

One set of cards - lots of low-prep practice options

1 SAME FAMILY ORDER

Use all 5 cards from one letter/color family. Convert or approximate, then order least to greatest.



2 SAME HEADING SORT

Pull 5 cards with the same heading. Ignore family letters and order one representation type at a time.



3 BUILD THE NUMBER LINE

Arrange 5 cards across a desk or tabletop number line from least to greatest.



4 BEAT THE TEACHER

Display 5 cards. Students order them on whiteboards before the teacher reveals the correct order.



5 GREATEST WINS

Partners flip one card each. Compare values; the greater value wins the round.



6 LEAST WINS

Same as Greatest Wins, but the smaller value takes the round. Great practice with negatives.



7 CLOSEST TO...

Draw several cards and decide which is closest to a benchmark such as 0, 1, 5, 10, or pi.



8 FIND THE ERROR

Place a 5-card family in an incorrect order. Students identify and correct the mistake.



9 SPEED SORT

Pairs race the clock to correctly order a family, then swap with another family and repeat.



10 CREATE A CHALLENGE

Students choose 5 cards, solve and order them, then pass the unordered set to another pair.



TEACHER TIP Laminate once. Students can use the blank card boxes for conversions and approximations. Start with same-heading sorts for support, then move into mixed family challenges.

FAMILY A

DECIMAL

A



3.08



FRACTION

A



$\frac{25}{8}$



PI

A



π



PERCENT

A



318%



NON-PERFECT ROOT

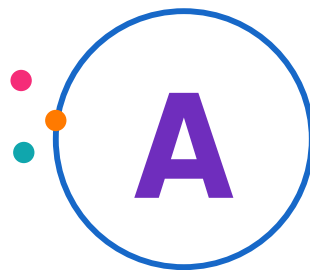
A



$\sqrt{11}$



FAMILY DIVIDER



Store all Family A
cards together.

FAMILY B

SCIENTIFIC NOTATION

B



$$1.9 \times 10^0$$

MIXED NUMBER

B



$$1 \frac{19}{20}$$

PERCENT

B



$$198\%$$

PERFECT SQUARE ROOT

B



$$\sqrt{4}$$

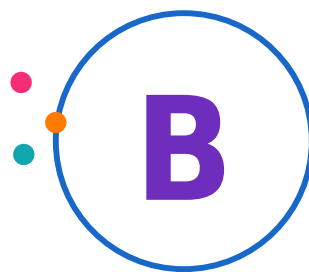
DECIMAL

B



$$2.03$$

FAMILY DIVIDER



Store all Family B
cards together.

FAMILY C

INTEGER

C



-3



FRACTION

C



$-\frac{13}{4}$



DECIMAL

C



-3.10



SCIENTIFIC NOTATION

C



-3.05×10^0



NON-PERFECT ROOT

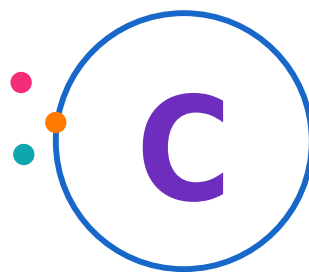
C



$-\sqrt{10}$



FAMILY DIVIDER



Store all Family C
cards together.

FAMILY D

PERCENT

D



42%

FRACTION

D



$\frac{7}{16}$

SCIENTIFIC NOTATION

D



4.6×10^{-1}

DECIMAL

D



0.48

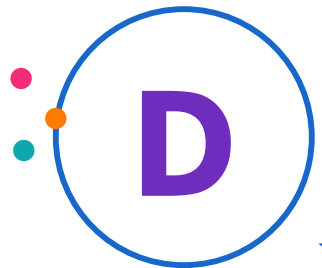
INTEGER

D



1

FAMILY DIVIDER



Store all Family D
cards together.

FAMILY E

PERFECT SQUARE ROOT

E



$$\sqrt{25}$$

FRACTION

E



$$\frac{41}{8}$$

PERCENT

E



$$515\%$$

DECIMAL

E



$$5.20$$

SCIENTIFIC NOTATION

E



$$5.25 \times 10^0$$

FAMILY DIVIDER

E

Store all Family E
cards together.

FAMILY F

MIXED NUMBER

F



$$4 \frac{2}{5}$$



$$\sqrt{20}$$



4.49

PERCENT

F



452%



$$4.6 \times 10^0$$

FAMILY DIVIDER

F

Store all Family F
cards together.

FAMILY G

INTEGER

G



-1



PERCENT

G



-125%



DECIMAL

G



-1.10



FRACTION

G



$-\frac{9}{8}$



SCIENTIFIC NOTATION

G



-1.05×10^0



FAMILY DIVIDER



Store all Family G cards together.

FAMILY H

PERFECT SQUARE ROOT

H



$\sqrt{49}$

MIXED NUMBER

H



$7 \frac{1}{10}$

PERCENT

H



715%

FRACTION

H



$\frac{29}{4}$

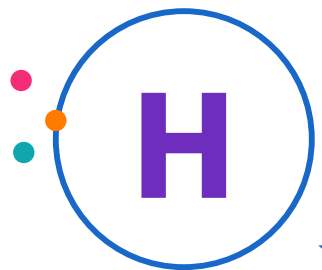
DECIMAL

H



7.3

FAMILY DIVIDER



Store all Family H
cards together.

FAMILY I

PI

I



π

SCIENTIFIC NOTATION

I



3.2×10^0

FRACTION

I



$\frac{13}{4}$

MIXED NUMBER

I



$3 \frac{1}{3}$

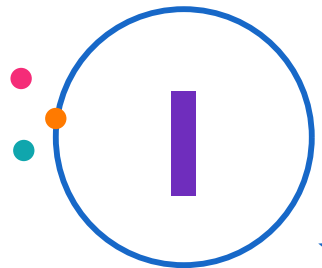
NON-PERFECT ROOT

I



$\sqrt{12}$

FAMILY DIVIDER



Store all Family I
cards together.

FAMILY J

INTEGER

J



-5



PERFECT SQUARE ROOT

J



$-\sqrt{16}$



DECIMAL

J



-4.30



PERCENT

J



-425%



MIXED NUMBER

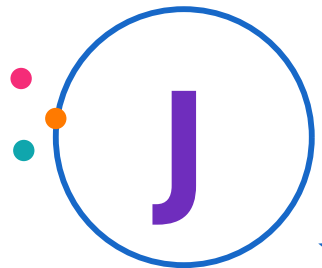
J



$-4 \frac{1}{5}$



FAMILY DIVIDER



Store all Family J
cards together.

FAMILY K

FRACTION

K



$$\frac{3}{8}$$



0.39



41%

SCIENTIFIC NOTATION

K

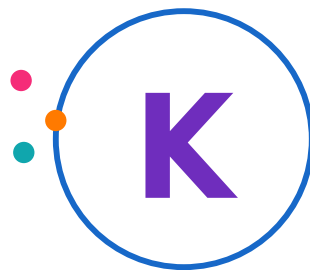


$$4.3 \times 10^{-1}$$



0

FAMILY DIVIDER



Store all Family K
cards together.

FAMILY L

PI

L



π



PERFECT SQUARE ROOT

L



$\sqrt{9}$



MIXED NUMBER

L



$3 \frac{1}{8}$



DECIMAL

L



3.16



PERCENT

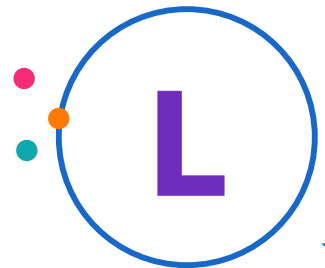
L



319%



FAMILY DIVIDER



Store all Family L
cards together.

FAMILY M

NON-PERFECT ROOT

M



$\sqrt{50}$



$\frac{57}{8}$



7.2×10^0

PERCENT

M



725%



8

INTEGER

M

FAMILY DIVIDER

M

Store all Family M
cards together.

FAMILY N

SCIENTIFIC NOTATION

N



$$-2.8 \times 10^0$$



$$-\sqrt{8}$$

FRACTION

N



$$-\frac{17}{6}$$

DECIMAL

N



$$-2.79$$



$$-275\%$$

FAMILY DIVIDER

N

Store all Family N
cards together.

FAMILY O

MIXED NUMBER

0



$$9 \frac{3}{4}$$



$$\sqrt{100}$$



$$1025\%$$

SCIENTIFIC NOTATION

0

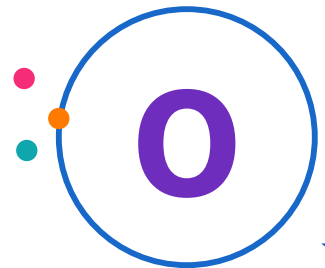


$$1.04 \times 10^1$$



$$\sqrt{110}$$

FAMILY DIVIDER



Store all Family O
cards together.

ANSWER KEY

Mixed families ordered least to greatest

- A** $3.08 < 25/8 < \pi \approx 3.14 < 318\% < \sqrt{11} \approx 3.32$
- B** $1.9 \times 10^0 < 1 \frac{19}{20} < 198\% < \sqrt{4} < 2.03$
- C** $-13/4 < -\sqrt{10} \approx -3.16 < -3.10 < -3.05 \times 10^0 < -3$
- D** $42\% < 7/16 < 4.6 \times 10^{-1} < 0.48 < 1$
- E** $\sqrt{25} < 41/8 < 515\% < 5.20 < 5.25 \times 10^0$
- F** $4 \frac{2}{5} < \sqrt{20} \approx 4.47 < 4.49 < 452\% < 4.6 \times 10^0$
- G** $-125\% < -9/8 < -1.10 < -1.05 \times 10^0 < -1$
- H** $\sqrt{49} < 7 \frac{1}{10} < 715\% < 29/4 < 7.3$
- I** $\pi \approx 3.14 < 3.2 \times 10^0 < 13/4 < 3 \frac{1}{3} < \sqrt{12} \approx 3.46$
- J** $-5 < -4.30 < -425\% < -4 \frac{1}{5} < -\sqrt{16}$
- K** $0 < 3/8 < 0.39 < 41\% < 4.3 \times 10^{-1}$
- L** $\sqrt{9} < 3 \frac{1}{8} < \pi \approx 3.14 < 3.16 < 319\%$
- M** $\sqrt{50} \approx 7.07 < 57/8 < 7.2 \times 10^0 < 725\% < 8$
- N** $-17/6 < -\sqrt{8} \approx -2.83 < -2.8 \times 10^0 < -2.79 < -275\%$
- O** $9 \frac{3}{4} < \sqrt{100} < 1025\% < 1.04 \times 10^1 < \sqrt{110} \approx 10.49$

HEADING QUICK INDEX

Use this page to quickly find cards for same-heading sorts.

INTEGER

C: -3
D: 1
G: -1
J: -5
K: 0
M: 8

FRACTION

A: $\frac{25}{8}$
C: $-\frac{13}{4}$
D: $\frac{7}{16}$
E: $\frac{41}{8}$
G: $-\frac{9}{8}$
H: $\frac{29}{4}$
I: $\frac{13}{4}$
K: $\frac{3}{8}$
M: $\frac{57}{8}$
N: $-\frac{17}{6}$

MIXED NUMBER

B: $1 \frac{19}{20}$
F: $4 \frac{2}{5}$
H: $7 \frac{1}{10}$
I: $3 \frac{1}{3}$
J: $-4 \frac{1}{5}$
L: $3 \frac{1}{8}$
O: $9 \frac{3}{4}$

DECIMAL

A: 3.08
B: 2.03
C: -3.10
D: 0.48
E: 5.20
F: 4.49
G: -1.10
H: 7.3
J: -4.30
K: 0.39
L: 3.16
N: -2.79

PERCENT

A: 318%
B: 198%
D: 42%
E: 515%
F: 452%
G: -125%
H: 715%
J: -425%
K: 41%
L: 319%
M: 725%
N: -275%
O: 1025%

SCIENTIFIC NOTATION

B: 1.9×10^0
C: -3.05×10^0
D: 4.6×10^{-1}
E: 5.25×10^0
F: 4.6×10^0
G: -1.05×10^0
I: 3.2×10^0
K: 4.3×10^{-1}
M: 7.2×10^0
N: -2.8×10^0
O: 1.04×10^1

PERFECT SQUARE ROOT

B: $\sqrt{4}$
E: $\sqrt{25}$
H: $\sqrt{49}$
J: $-\sqrt{16}$
L: $\sqrt{9}$
O: $\sqrt{100}$

NON-PERFECT ROOT

A: $\sqrt{11}$
C: $-\sqrt{10}$
F: $\sqrt{20}$
I: $\sqrt{12}$
M: $\sqrt{50}$
N: $-\sqrt{8}$
O: $\sqrt{110}$

PI

A: π
I: π
L: π

$$2x+5=17$$

THANK YOU!



$$y=mx+b$$

$$\sqrt{x}$$

 π

for supporting my small business

MATH MADE SIMPLE

THIS RESOURCE INCLUDES



75 reusable cards



15 mixed families



Answer key included



Heading quick index

TERMS OF USE



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$$a^2+b^2=c^2$$



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