

Luna's Space Adventure

Name _____

Grade 5 · Fractions and decimals together · 5.NS.1

Date _____



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Fraction to decimal Make the denominator 10, 100 or 1,000, or divide.

$$\frac{1}{20} = \boxed{}$$

$$\frac{5}{8} = \boxed{}$$

$$\frac{3}{4} = \boxed{}$$

$$\frac{1}{2} = \boxed{}$$

$$\frac{4}{5} = \boxed{}$$

$$\frac{3}{20} = \boxed{}$$

$$\frac{3}{5} = \boxed{}$$

$$\frac{2}{5} = \boxed{}$$

$$\frac{11}{25} = \boxed{}$$

Decimal to fraction Write it over 10, 100 or 1,000, then simplify.

$$0.375 = \frac{\boxed{}}{\boxed{}}$$

$$0.45 = \frac{\boxed{}}{\boxed{}}$$

$$0.6 = \frac{\boxed{}}{\boxed{}}$$

$$0.4 = \frac{\boxed{}}{\boxed{}}$$

$$0.35 = \frac{\boxed{}}{\boxed{}}$$

$$0.625 = \frac{\boxed{}}{\boxed{}}$$

Greater, less or equal? Change one so both are decimals.

$$0.3 \bigcirc \frac{3}{10}$$

$$\frac{1}{20} \bigcirc 0.14$$

$$\frac{3}{4} \bigcirc 0.61$$

$$0.59 \bigcirc \frac{5}{8}$$

$$\frac{7}{20} \bigcirc 0.42$$

$$0.43 \bigcirc \frac{2}{5}$$

Put them in order Least to greatest, then greatest to least.

$$3/5 \cdot 0.52 \cdot 0.09 \cdot 1/4 \quad \underline{\hspace{10em}}$$

$$0.26 \cdot 0.51 \cdot 1/4 \cdot 7/10 \quad \underline{\hspace{10em}}$$



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ANSWER KEY



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Fraction to decimal Make the denominator 10, 100 or 1,000, or divide.

$$\frac{1}{20} = 0.05$$

$$\frac{5}{8} = 0.625$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{2} = 0.5$$

$$\frac{4}{5} = 0.8$$

$$\frac{3}{20} = 0.15$$

$$\frac{3}{5} = 0.6$$

$$\frac{2}{5} = 0.4$$

$$\frac{11}{25} = 0.44$$

Decimal to fraction Write it over 10, 100 or 1,000, then simplify.

$$0.375 = \frac{3}{8}$$

$$0.45 = \frac{9}{20}$$

$$0.6 = \frac{3}{5}$$

$$0.4 = \frac{2}{5}$$

$$0.35 = \frac{7}{20}$$

$$0.625 = \frac{5}{8}$$

Greater, less or equal? Change one so both are decimals.

$$0.3 = \frac{3}{10}$$

$$\frac{1}{20} < 0.14$$

$$\frac{3}{4} > 0.61$$

$$0.59 < \frac{5}{8}$$

$$\frac{7}{20} < 0.42$$

$$0.43 > \frac{2}{5}$$

Put them in order Least to greatest, then greatest to least.

$$3/5 \cdot 0.52 \cdot 0.09 \cdot 1/4$$

$$0.09 < 1/4 < 0.52 < 3/5$$

$$0.26 \cdot 0.51 \cdot 1/4 \cdot 7/10$$

$$7/10 > 0.51 > 0.26 > 1/4$$



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GUIDE

① What this sheet practises

Changing fractions to decimals and back, and comparing and ordering fractions and decimals together.

② A problem from the sheet, worked out

Fraction to decimal Make the denominator 10, 100 or 1,000, or divide.

$$\frac{1}{20} = 0.05$$

$$\frac{5}{8} = 0.625$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{2} = 0.5$$

$$\frac{4}{5} = 0.8$$

$$\frac{3}{20} = 0.15$$

$$\frac{3}{5} = 0.6$$

$$\frac{2}{5} = 0.4$$

$$\frac{11}{25} = 0.44$$

How: Turn the fraction into tenths, hundredths or thousandths ($\frac{3}{4} = \frac{75}{100} = 0.75$), then compare decimals place by place.

③ Words to know

decimal a number with a point: 0.75

fraction parts of a whole: $\frac{3}{4}$

equivalent the same amount written another way

simplest form a fraction that can't be made smaller

④ Watch for

- Writing $\frac{3}{4}$ as 0.34.
- Thinking 0.4 is less than 0.35 because 4 is less than 35.
- Comparing $\frac{3}{8}$ and 0.4 without changing one to match the other.

⑤ Where it fits

BEFORE

4.NF.C.6

Write tenths and hundredths as decimals.

THIS SHEET

5.NS.1

Switch between fractions and decimals, and compare and order mixed sets of fractions and decimals.

NEXT

5.NBT.A.3

Read, write and compare decimals to thousandths.

⑥ Helping at home

In the kitchen, talk about $\frac{1}{4}$ cup as 0.25 cup. Ask which is more: $\frac{3}{8}$ of a pizza or 0.4 of it.

