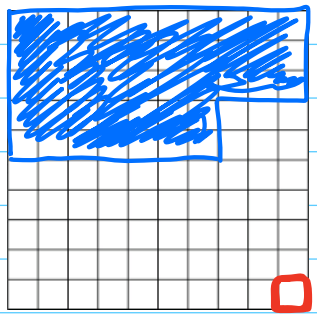
Comparing Fractions, Decimals & Percents

To write a **fraction as a percent** → first, write the fraction w/ a denominator that is a **power of 10.**

A # that is - product of 10
Ex: 10, 100, 1000, 10000

$\frac{44}{100}$ → 0.44 → 44%



← can use a 100's grid to represent one whole or 100%

one square = $\frac{1}{100}$ or 1% or 0.01

A shaded part of a 100s chart can be represented **3 different ways**

1 → **percent** 44%

2 → **decimal** 0.44

3 → **fraction** $\frac{44}{100}$

★ Write each **percent** as a **decimal**

7% 0.07

$7\frac{1}{4}$% 0.07$\frac{1}{4}$ → 0.0725

Rule: Divide by 100 → or... move decimal 2 places to the left

WRITE EACH DECIMAL AS A PERCENT

0.72 → 72% 0.465 → 46.5% 1.20 → 120%

RULE: MULTIPLY BY 100 → OR... MOVE DECIMAL 2 PLACES to the RIGHT

WRITE EACH DECIMAL AS A FRACTION

$0.8 = \frac{8}{10}$ $0.652 = \frac{652}{1000} = \frac{163}{250}$ $1.52 = 1\frac{52}{100}$

TERMINATING DECIMALS STOP AT SOME POINT. MEANS THEY HAVE A FINAL DIGIT in a PLACE.

RULE: WRITE ALL DECIMAL DIGITS in NUMERATOR AND THE PLACE in DENOMINATOR $0.4 = \frac{4}{10}$

WRITE EACH FRACTION AS A PERCENT

$1\frac{21}{41}$

$41\overline{)210}$ = 0.512

-205

50

-41

90

$\frac{21}{41} = 0.51 + 1.0 = 1.51$

PERCENT → $1.51 \times 100 = 151\%$

RULE: CONVERT TO DECIMAL, THEN MULTIPLY BY 100

★ WRITE EACH FRACTION AS A DECIMAL

$\frac{12}{39}$ (to NEAREST HUNDREDTH)

$39\overline{)120}$ = 0.307

-117

300

-273

27

0.307 = 0.31

5/1000 (to NEAREST THOUSANDTH) = 0.005

RULE: To convert Any FRACTION to a DECIMAL...

$\frac{3}{7}$ $7\overline{)3}$

DIVIDE THE NUMERATOR BY THE DENOMINATOR

★ WRITE EACH PERCENT AS A FRACTION

36% $\frac{36}{100}$

PERCENT MEANS... OUT of 100

RULE: WRITE AS A FRACTION OUT of 100 & REDUCE TO LOWEST TERMS.

NO DECIMALS

We can use decimals or percents to compare two test marks when the total marks are different. Liz had 23 1/2 out of 30 on her first math test. She had 31 1/2 out of 40 on her second math test. On which test did Liz do better?

$40 \times \frac{23.5}{40 \times 30}$ $\quad$ $\frac{31.5 \times 30}{40 \times 30}$

$0.78\overline{3}$

$30\overline{)23.5}$

210

250

-240

100

-90

78.3%

0.7875

$40\overline{)31.5}$

-280

350

320

300

-280

200

-200

0

78.75%

SHE DID BETTER ON THE 2ND TEST

THE CHEAT SHEET

