

Percent Practice Review Problems

Fraction, Decimal, Percent Conversions:

Use the given ratio to write as a fraction, decimal, percent. Be sure to simplify the fraction ☺

RATIOS	FRACTION (Simplify)	DECIMAL	PERCENT
3 out of 50 students play bagpipes	$\frac{3}{50} \times \frac{2}{2} = \frac{6}{100}$.06	6%
5 out of 20 dogs have white spots	$\frac{5}{20} \div 5 = \frac{1}{4} = \frac{25}{100}$.25	25%
Student Council raised \$142 out of a goal of \$100	$\frac{142}{100} \div 2 = \frac{71}{50} = 1\frac{21}{50}$	1.42	142%

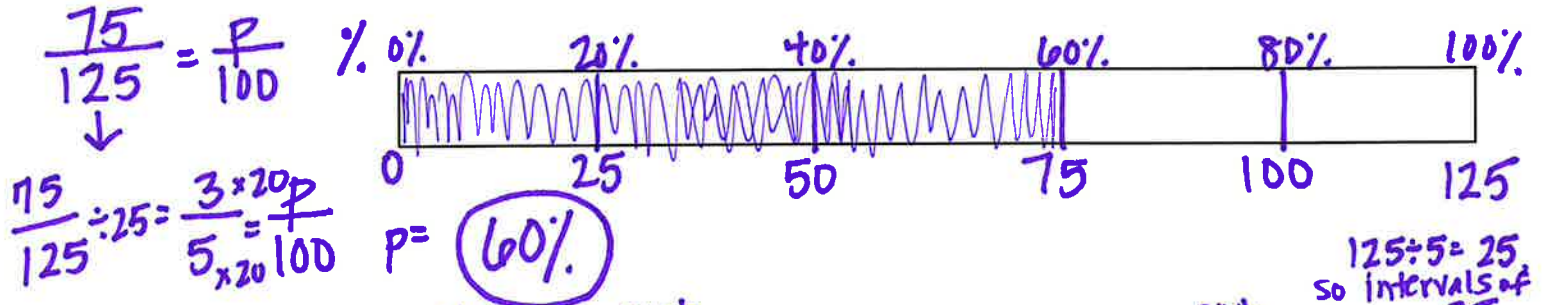
RATIOS	FRACTION (Simplify)	DECIMAL	PERCENT
14 out of 25 students have a cat	$\frac{14}{25} \times \frac{4}{4} = \frac{56}{100}$.56	56%
12 out of 16 boys like the color blue best	$\frac{12}{16} \div 4 = \frac{3}{4} = \frac{75}{100}$.75	75%
Mary collected \$150 of her \$120 fundraising goal	$\frac{150}{120} \div 30 = \frac{5}{4} = 1\frac{1}{4}$	1.25	125%

Percent Practice Review Problems

$$\frac{\%}{100} = \frac{\text{part}}{\text{whole}}$$

Finding Percent

1. There were 125 ice cream cones. 75 were mint chocolate chip. What percent of the ice cream cones were mint chocolate chip? Create a tape diagram, too 😊



2. Grace has 25 dogs total. 4 of the dogs are Pugs and the rest are Golden Retrievers. What percentage of the dogs are Golden Retrievers?

$\frac{21}{25} = \frac{n}{100}$
 $n = 84$

125 ÷ 5 = 25
 so intervals of 25
 25 - 4 = 21
 total - pugs golden

84% are Golden Retrievers

3. On one of Mrs. Mayer's math assessments Sophia earned 26/40 and Alex earned 7/10. Who got the higher score? You should convert these fractions into percents to compare which score is better!

Sophia $\frac{26}{40} = \frac{n}{100}$

Alex $\frac{7}{10} = \frac{n}{100}$ $n = 70\%$

$\frac{26}{40} \div 2 = \frac{13 \times 5}{20 \times 5} = \frac{n}{100}$
 $n = 65\%$

Alex's score is higher!

4. Jack sold 38/50 of his raffle tickets for the school dance. Patrick sold 21/25 of his raffle tickets. Who sold a higher percentage of their tickets?

Patrick $\frac{38 \times 2}{50 \times 2} = \frac{n}{100}$
 $n = 76\%$

Jack $\frac{21 \times 4}{25 \times 4} = \frac{n}{100}$
 $n = 84\%$

Jack sold a higher percentage.

5. Joe and Bob are mowing lawns. Joe has finished 24 out of the 60 total lawns that need to be mowed. Bob has finished 90 out of his 150 lawns. Who has a higher percentage of their lawns mowed?

Joe $\frac{24}{60} = \frac{n}{100}$
 $\frac{24}{60} \div 12 = \frac{2 \times 20}{5 \times 20} = \frac{n}{100}$
 $n = 40\%$

Bob $\frac{90}{150} = \frac{n}{100}$
 $\frac{90}{150} \div 30 = \frac{3 \times 20}{5 \times 20} = \frac{n}{100}$
 $n = 60\%$

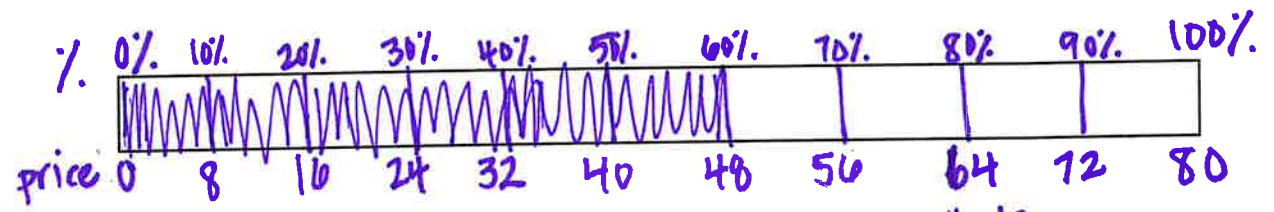
Bob mowed a greater %.

Percent Practice Review Problems

Finding "part"

1. Farmer Joe ordered hay bales that were 60% off. If the original price was \$80, how much did he save? Create a tape diagram, too 😊

whole
\$48 was saved



$$\frac{60}{100} = \frac{P}{80}$$

↓

$$\frac{60}{100} \div 10 = \frac{6 \times 8}{10 \times 8} \frac{P}{80}$$

$$P = 48$$

2. Ivy is buying a pair of boots that are 20% off. If the original price is \$115, how much does she save with the discount?

whole
Ivy saved
\$23

$$\frac{20}{100} = \frac{P}{115}$$

↓

$$\frac{20}{100} \div 20 = \frac{1 \times 23}{5 \times 23} \frac{P}{115} \quad P = 23$$

3. Betsy got a manicure for 15% off. If the manicure originally cost \$20, how much did she save with the discount?

whole
Betsy saved \$3

$$\frac{15}{100} = \frac{d}{20} \quad d = 3$$

4. Danny worked at a pet store. There were 15 cats at the beginning of the day, but 40% of the cats were sold throughout the day. How many cats were left when the pet store closed?

whole
6 cats were sold,
so 9 cats
remained.

$$\frac{40}{100} = \frac{P}{15}$$

↓

$$\frac{40}{100} \div 20 = \frac{2 \times 3}{5 \times 3} \frac{P}{15} \quad P = 6$$

5. Calo set a goal of eating 500 hot dogs this year. If he has reached 90% of his goal, how many hot dogs does he need to eat before New Year's Eve?

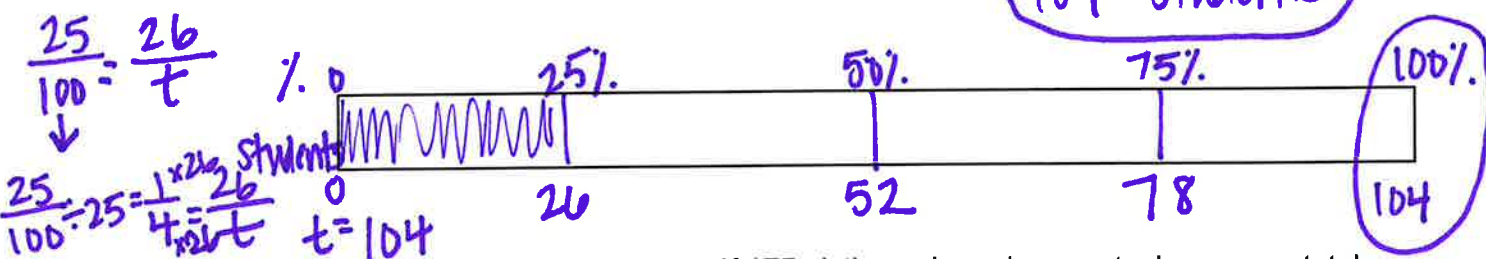
whole
Calo ate 450
hot dogs
and needs to eat 50 more!

$$\frac{90}{100} = \frac{P}{500} \quad P = 450$$

Percent Practice Review Problems

Finding "whole"

1. 25% of All Star students plan to attend the Indians' game in May. If 26 students are attending the game, how many total students are on the team? Create a tape diagram ☺



2. 70% of sixth graders play sports. If 175 sixth graders play sports, how many total students are in the sixth grade?

Handwritten work for problem 2:

$$\frac{70}{100} = \frac{175}{s}$$

$$\frac{70}{100} \div 10 = \frac{7 \times 25}{10 \times 25} = \frac{175}{s} \quad s = 250$$

250 total students in sixth grade.

3. Betsy ate 24 donut holes for breakfast this morning. If this was 15% of the donuts, what was the total number of donut holes?

Handwritten work for problem 3:

$$\frac{15}{100} = \frac{24}{d}$$

$$\frac{15}{100} \div 5 = \frac{3 \times 8}{20 \times 8} = \frac{24}{d} \quad d = 160$$

160 total donuts

4. 126 of the sheep on the farm had eaten. If this number represents 42% of the sheep, how many total sheep are on the farm?

Handwritten work for problem 4:

$$\frac{42}{100} = \frac{126}{s}$$

$$\frac{42}{100} \div 2 = \frac{21 \times 6}{50 \times 6} = \frac{126}{s} \quad s = 300$$

300 total sheep

5. Lucy was going to the animal shelter to get a new kitten! There were six kittens, which represented 30% of the animals in the shelter. How many animals total were in the shelter?

Handwritten work for problem 5:

$$\frac{30}{100} \div 5 = \frac{6}{t} \quad t = 20$$

20 total animals

Percent Practice Review Problems

Percent Word Problems- "Sale Price" problems

1. Mr. Carlson paid \$126 for a hp laptop. Mr. Carlson used a 40% discount. What was the original price of the hp laptop?

$$\frac{60 \times 21}{100 \times 21} = \frac{126}{W} \quad W = 210$$

saved 40% so he paid 60% of original price

$$100 - 40 = 60$$

The original price of the laptop was **\$210.**

2. Falyn wanted to buy a stuffed animal owl for Annalese. Falyn paid \$34 after a 15% discount. What was the original price of the owl?

$$\frac{85}{100} = \frac{34}{t}$$

$$\frac{85}{100} \div 5 = \frac{17 \times 2}{20 \times 2} = \frac{34}{t} \quad t = 40$$

She saved 15%, so she paid 85%.

\$40 was the original price

3. The sale price of a unicorn is \$350 after a 75% discount. What was the original price of the unicorn?

$$\frac{25 \times 14}{100 \times 14} = \frac{350}{W} \quad W = 1400$$

75% saved, so we paid 25% of original price.

$$100 - 75 = 25$$

\$1,400 was the original price of the unicorn

4. Bob paid \$56 after a 30% discount for a LeBron James jersey. What was the original price of the jersey?

$$\frac{70}{100} = \frac{56}{P}$$

$$\frac{70}{100} \div 10 = \frac{7 \times 8}{10 \times 8} = \frac{56}{P} \quad P = 80$$

30% saved, so 70% paid of original price

\$80 is the original price of the jersey

5. Stephanie paid \$63 after a 25% discount for a new dress to wear to her holiday party. What was the original price of the dress?

$$\frac{75}{100} = \frac{63}{t}$$

$$\frac{75}{100} \div 25 = \frac{3 \times 21}{4 \times 21} = \frac{63}{t} \quad t = 84$$

\$84 is the original price of the dress

25% saved, so 75% paid