

"I Understand How Percents and Ratios are Related and Can Use Percents to Solve Real-World Problems."

A Mix of Percent Problems

A percent can always be used to compare a part to a whole. In a percent, the whole is always 100.

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

In these word problems it is important to figure out what is the part and what is the whole. **LABELS will be CRUCIAL!**

1. Penguins spend almost 75% of their lives in the sea. An Emperor Penguin in the wild has a life span of about 18 years. About how many years does this penguin spend in the sea?

2. Kai calculates that he spends 15% of a school day in science class. If he spends 75 minutes in science class, how many minutes does Kai spend in school?

3. During the basketball season, Tyrone made 37 baskets out of 71 attempts. About what percent of his shots did he make?

Got It?

4. . At birth, a newborn baby's head is about 25% of its total length. If a baby's head is 4.5 inches long, how many total inches is the baby?

5 Suppose Marisol scored a 96% on an English test. There were 50 questions on the test. How many did Marisol answer correctly?

6. Twenty-four students in Jamal's class are wearing tennis shoes. There are thirty students in his class. What percent of the students in Jamal's class are wearing tennis shoes?

7. Kayleigh decided to donate 30% of her savings. If she has \$238 in her savings account, about how much will she donate?

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1. Penguins spend almost 75% of their lives in the sea. An Emperor Penguin in the wild has a life span of about 18 years. About how many years does this penguin spend in the sea?

spent @ sea

Whole life

$$\frac{75}{100} = \frac{X}{18}$$

$100X = 1350$
 $\div 100$
 $X = 13.5$

13.5 years

2. Kai calculates that he spends 15% of a school day in science class. If he spends 75 minutes in science class, how many minutes does Kai spend in school?

In Science

Min in School

$$\frac{15}{100} = \frac{75}{X}$$

$15X = 7500$
 $\div 15$
 $X = 500$

500 minutes

3. During the basketball season, Tyrone made 37 baskets out of 71 attempts. About what percent of his shots did he make?

makes attempts

$$\frac{X}{100} = \frac{37}{71}$$

$3700 = 71X$
 $\div 71$
 $X = 52.1$

About 52%

Got It?

4. . At birth, a newborn baby's head is about 25% of its total length. If a baby's head is 4.5 inches long, how many total inches is the baby?

$$\begin{array}{l} \text{head} \\ \hline \text{total length} \end{array} \quad \begin{array}{r} \cancel{25} \quad \cancel{4.5} \\ \hline \cancel{100} \quad X \\ \downarrow \quad \downarrow \\ \frac{450}{25} = \frac{25x}{25} \\ 18 = X \end{array}$$

18 inches

- 5 Suppose Marisol scored a 96% on an English test. There were 50 questions on the test. How many did Marisol answer correctly?

$$\begin{array}{l} \text{Correct} \\ \hline \text{total quest} \end{array} \quad \begin{array}{r} 96 \quad \div 2 \\ \hline 100 \\ \div 2 \end{array} = \begin{array}{r} X \\ \hline 50 \end{array}$$

48 correct

6. Twenty-four students in Jamal's class are wearing tennis shoes. There are thirty students in his class. What percent of the students in Jamal's class are wearing tennis shoes?

$$\begin{array}{r} \cancel{X} \quad \cancel{24} \\ \hline \cancel{100} \quad \cancel{30} \\ \downarrow \quad \downarrow \\ \frac{2400}{\div 30} = \frac{30x}{\div 30} \\ 80 = X \end{array}$$

80%

7. Kayleigh decided to donate 30% of her savings. If she has \$238 in her savings account, about how much will she donate?

$$\begin{array}{l} \text{donate} \\ \hline \text{total savings} \end{array} \quad \begin{array}{r} \cancel{30} \quad \cancel{X} \\ \hline \cancel{100} \quad \cancel{238} \\ \downarrow \quad \downarrow \\ 100x = 7140 \\ \div 100 \\ X = \$71.40 \end{array}$$

\$71.40