

**Topic:** Fractions to decimals to percents

**Question:** Find a mixed number that represents the expression.

$$3\% \text{ of } 80$$

**Answer choices:**

A  $2\frac{1}{2}$

B  $2\frac{2}{5}$

C  $2\frac{3}{5}$

D  $2\frac{1}{4}$



**Solution: B**

To find 3 % of 80, we set it up as

$$\frac{3}{100} \cdot 80$$

$$\frac{3}{5} \cdot 4$$

$$\frac{12}{5}$$

5 goes into 12 two times, with a remainder of 2, so we can change the improper fraction to a mixed number and get

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



**Topic:** Fractions to decimals to percents**Question:** Convert the fraction to a percent.

$$\frac{40}{80}$$

**Answer choices:**

- A     75 %
- B     80 %
- C     20 %
- D     50 %



**Solution: D**

First, since the fraction isn't already in lowest terms, we'll reduce it to lowest terms.

$$\frac{40}{80}$$

$$\frac{40 \div 40}{80 \div 40}$$

$$\frac{1}{2}$$

To convert this fraction to a percent, we can first convert to a decimal using long division, and then convert the decimal to a percent by moving the decimal place, or we can set up a proportion.

$$\frac{1}{2} = \frac{x}{100}$$

$$1 \cdot 100 = 2 \cdot x$$

$$100 = 2x$$

$$\frac{100}{2} = x$$

$$50 = x$$

So the fraction 40/80 is equivalent to 50%.



**Topic:** Fractions to decimals to percents**Question:** What percent of the students have brown hair? $\frac{7}{12}$  of the 60 students have brown hair**Answer choices:**

A      35 %

B       $58\frac{1}{3}$  %

C      57 %

D      32 %



**Solution: B**

First, we need to figure out what  $\frac{7}{12}$  of 60 is.

$$\frac{7}{12} \cdot 60$$

$$\frac{7}{1} \cdot 5$$

$$35$$

We can now say that 35 of the 60 students have brown hair, but we've been asked for the percentage of students with brown hair, so we need to convert

$$\frac{35}{60}$$

to a percent.

$$\frac{35}{60} = \frac{x}{100}$$

$$\frac{7}{12} = \frac{x}{100}$$

Cross multiplying, we get

$$12x = 700$$

$$x = \frac{700}{12}$$



$$x = \frac{175}{3}$$

$$x = 58\frac{1}{3}$$

So 7/12 of 60 is equivalent to approximately 58.33 %.

