Topic: Mixed numbers and improper fractions

Question: Change the mixed number to an improper fraction.

$$15\frac{2}{5}$$

Answer choices:

A $\frac{77}{5}$

B $\frac{45}{5}$

C $\frac{32}{5}$

D $\frac{17}{5}$

Solution: A

To change a mixed number to an improper fraction, just multiply the denominator by the whole number, then add the result to the numerator, putting that final result over the original denominator.

$$15\frac{2}{5}$$

$$15+\frac{2}{5}$$

$$\frac{(5\times 15)+2}{5}$$

$$\frac{75+2}{5}$$

$$\frac{77}{5}$$

Topic: Mixed numbers and improper fractions

Question: Write the mixed number as an improper fraction.

$$7\frac{3}{5}$$

Answer choices:

A $\frac{21}{5}$

B $\frac{35}{3}$

C $\frac{38}{5}$

D $\frac{3}{35}$

Solution: C

To change a mixed number to an improper fraction, just multiply the denominator by the whole number, then add the result to the numerator, putting that final result over the original denominator.

$$7\frac{3}{5}$$

$$7+\frac{3}{5}$$

$$\frac{(5\times 7)+3}{5}$$

$$\frac{35+3}{5}$$

$$\frac{38}{5}$$

Topic: Mixed numbers and improper fractions

Question: Write the improper fraction as a mixed number.

$$\frac{42}{10}$$

Answer choices:

A $\frac{21}{5}$

B $4\frac{1}{5}$

C $5\frac{1}{4}$

D $10\frac{1}{2}$

Solution: B

To change an improper fraction to a mixed number, first figure out how many times the denominator can go into the numerator. For the fraction

$$\frac{42}{10}$$

10 can go into 42 four times, which means the whole number in our mixed number will be 4. That gets us up to 40, and from there we've only got 2 remaining to get up to 42. Which means the numerator of the fraction part of our mixed number will be 2, and the denominator will be the original denominator of 10. So the mixed number will be

$$4\frac{2}{10}$$

Lastly, we need to make sure we reduce our fraction to lowest terms.

$$4\frac{2 \div 2}{10 \div 2}$$

$$4\frac{1}{5}$$