Topic: Decimal equations

Question: Solve for the variable.

$$0.2x + 4 = 10$$

Answer choices:

A $x = 14$

B $x = 0.3$

C $x = 30$

D $x = 20$

Solution: C

In order to solve this equation, the first thing we'll do is get rid of the decimal by changing it to a whole number. Since the decimal in our equation ends in the tenths place, we'll need to multiply both sides of the equation by 10 in order to change the decimal to a whole number.

$$0.2x + 4 = 10$$

$$(0.2x + 4)(10) = 10(10)$$

$$0.2x(10) + 4(10) = 10(10)$$

$$2x + 40 = 100$$

$$x + 20 = 50$$

$$x = 30$$

Topic: Decimal equations

Question: Solve for the variable.

$$0.7m - 0.6m = 3.4$$

Answer choices:

A $m = 340$

B $m = 3.4$

C $m = .034$

D $m = 34$

Solution: D

In order to solve this equation, the first thing we'll do is get rid of the decimals by changing them to whole numbers. Since the decimals in our equation end in the tenths place, we'll need to multiply both sides of the equation by 10 in order to change the decimals to whole numbers.

$$0.7m - 0.6m = 3.4$$

$$(0.7m - 0.6m)(10) = 3.4(10)$$

$$0.7m(10) - 0.6m(10) = 3.4(10)$$

$$7m - 6m = 34$$

$$m = 34$$

Topic: Decimal equations

Question: Solve the equation.

$$0.04x - 0.2 = 0.1$$

Answer choices:

A   0.25

B   2.5

C   0.75

D   7.5

Solution: D

The longest decimal in the equation ends in the hundredths place, so to clear all the decimals, we need to multiply both sides of the equation by 100.

$$100(0.04x - 0.2) = 100(0.1)$$

$$100(0.04x) - 100(0.2) = 100(0.1)$$

Simplify and solve for x.

$$4x - 20 = 10$$

$$4x = 30$$

$$x = 7.5$$