

Answer 48

48. For what value of  $k$  the equation below has nosolution?

$$2x + 3 = x - 2kx - 5$$

- A) 1
- B) 2
- C) -1
- D) 0.5
- E) -0.5

First, simplify the equation by subtracting both  $x$  and  $3$ . We're looking for the value of  $k$ , so we need to isolate that variable

$$2x + 3 = x - 2kx - 5$$

$$x + 2kx = -8$$

$$x(1 + 2k) = -8$$

$$x = \frac{-8}{(1 + 2k)}$$

Next, we know that  $(1+2k)$  can't equal zero, so solving for  $k$  gives  $k$  can't equal  $-1/2$ .

So, answer E.