

反射テスト 1次方程式 いろいろ 03

1. 次の方程式を解け。(S級1分30秒, A級2分40秒, B級5分, C級7分30秒)

(1) $132 - 5(x + 9) = 87$

(2) $7 - 0.3x = 2 - \frac{x}{2}$

(3) $0.5(x - 2) = \frac{2}{3}(2x + 1)$

(4) $\frac{x - 1}{4} + 0.15x = 1 - \frac{x + 1}{3}$

2. 次の方程式を解け。(S級1分40秒, A級3分, B級5分30秒, C級8分)

(1) $123 - 5(7 + x) = 89$

(2) $7 - 0.4x = 1 - \frac{x}{4}$

(3) $\frac{2}{3}(x - 2) = 0.6(2x + 4)$

(4) $\frac{x-1}{5} + 0.16x = 1 - \frac{x+1}{3}$

反射テスト 1次方程式 いろいろ 03 解答解説

1. 次の方程式を解け。(S級1分30秒, A級2分40秒, B級5分, C級7分30秒)

(1) $132 - 5(x + 9) = 87$

$$132 - 5x - 45 = 87$$

$$-5x = 87 - 132 + 45$$

$$-5x = 0$$

$$x = 0$$

(2) $7 - 0.3x = 2 - \frac{x}{2}$

$$70 - 3x = 20 - 5x \quad \leftarrow \text{両辺} \times 10$$

$$-3x + 5x = 20 - 70$$

$$2x = -50$$

$$x = -25$$

(3) $0.5(x - 2) = \frac{2}{3}(2x + 1)$

$$15(x - 2) = 20(2x + 1) \quad \leftarrow \text{両辺} \times 30$$

$$3(x - 2) = 4(2x + 1) \quad \leftarrow \text{両辺} \div 5$$

$$3x - 6 = 8x + 4 \quad \leftarrow \text{展開}$$

$$3x - 8x = 4 + 6 \quad \leftarrow \text{移項}$$

$$-5x = 10$$

$$x = -2$$

(4) $\frac{x-1}{4} + 0.15x = 1 - \frac{x+1}{3}$

$$25(x - 1) + 15x = 100 - \frac{100(x + 1)}{3} \quad \leftarrow \times 100$$

$$75(x - 1) + 45x = 300 - 100(x + 1) \quad \leftarrow \times 3$$

$$15(x - 1) + 9x = 60 - 20(x + 1) \quad \leftarrow \div 5$$

$$15x - 15 + 9x = 60 - 20x - 20 \quad \leftarrow \text{展開}$$

$$24x + 20x = 40 + 15 \quad \leftarrow \text{移項}$$

$$44x = 55$$

$$x = \frac{5}{4}$$

2. 次の方程式を解け。(S級1分40秒, A級3分, B級5分30秒, C級8分)

(1) $123 - 5(7 + x) = 89$

$$123 - 35 - 5x = 89$$

$$-5x = 89 + 35 - 123$$

$$-5x = 1$$

$$x = -\frac{1}{5}$$

(2) $7 - 0.4x = 1 - \frac{x}{4}$

$$140 - 8x = 20 - 5x \quad \leftarrow \text{両辺} \times 20$$

$$-8x + 5x = 20 - 140$$

$$-3x = -120$$

$$x = 40$$

(3) $\frac{2}{3}(x - 2) = 0.6(2x + 4)$

$$20(x - 2) = 18(2x + 4) \quad \leftarrow \text{両辺} \times 30$$

$$10(x - 2) = 9(2x + 4) \quad \leftarrow \text{両辺} \div 2$$

$$10x - 20 = 18x + 36 \quad \leftarrow \text{展開}$$

$$10x - 18x = 36 + 20 \quad \leftarrow \text{移項}$$

$$-8x = 56$$

$$x = -7$$

(4) $\frac{x-1}{5} + 0.16x = 1 - \frac{x+1}{3}$

$$20(x - 1) + 16x = 100 - \frac{100(x + 1)}{3} \quad \leftarrow \times 100$$

$$60(x - 1) + 48x = 300 - 100(x + 1) \quad \leftarrow \times 3$$

$$15(x - 1) + 12x = 75 - 25(x + 1) \quad \leftarrow \div 4$$

$$15x - 15 + 12x = 75 - 25x - 25 \quad \leftarrow \text{展開}$$

$$27x + 25x = 50 + 15 \quad \leftarrow \text{移項}$$

$$52x = 65$$

$$x = \frac{5}{4}$$