

Name: _____

Date: _____

8.EE.7b

____ 1. What is the value of t that satisfies the equation below? (2016) (no calculator)

$$3(t + 4) - 2(2t + 3) = -4$$

A. $-\frac{11}{3}$

B. $-\frac{4}{5}$

C. 10

D. 11

____ 2. What is the solution to the equation shown below? (2017) no calculator

$$\frac{2}{3}x + 5 = 1$$

A. $x = -6$

B. $x = 4$

C. $x = -4.5$

D. $x = 9$

____ 3. What is the solution to the equation below? (2017)

$$5c + 4 = 2(c - 5)$$

A. $c = -4\frac{2}{3}$

B. $c = -3$

C. $c = -2$

D. $c = -1$

____ 4. What is the solution to the equation shown below? (2022)

$$2.5(x + 5) = 7.5x - 0.5$$

A. $x = 2.6$

B. $x = 1.1$

C. $x = -2.6$

D. $x = -1.1$

____5. What is the solution to the equation shown below? (2022)

$$-\frac{1}{3}(6y + 6) + 21 = 3y$$

A. $y = \frac{19}{5}$

B. $y = \frac{27}{5}$

C. $y = -\frac{9}{5}$

D. $y = -\frac{23}{5}$

6. Solve the equation below for d . (2013)

$$0.2(d - 6) = 0.3d + 5 - 3 + 0.1d$$

Show your work.

Answer $d =$ _____

7. Solve the equation below. (2014)

$$0.4 \left(2x + \frac{1}{2} \right) = 3[0.2x + (-2)] - 4$$

Show your work.

Answer $x =$ _____

8. Determine the solution to the equation below.

(2017)

$$3.1x + 7 - 7.4x = 1.5x - 6\left(x - \frac{3}{2}\right)$$

Show your work.

Answer _____

9. The steps a student took to solve an equation are shown below.

(2022)

$$\frac{3}{4}(-8x + 20) = -8(-x - 3)$$

Step 1: $-6x + 15 = 8x + 24$

Step 2: $15 = 2x + 24$

Step 3: $-9 = 2x$

Step 4: $x = -\frac{9}{2}$

What error did the student make and what is the correct value of x ?

Explain your answer.

10. Determine the solution to the equation shown below.

(2022)

$$3.2 - \frac{1}{2}(x + 4) = 4.8x + 2 - 5.2x$$

Show your work.

Answer $x =$ _____