A.REI.B.3: Solving Linear Equations 2

1 If $2ax - 5x = 2$, then x is equivalent to
1) $\frac{2+5a}{2a}$
2) $\frac{1}{a-5}$
3) $\frac{2}{2a-5}$
4) $7-2a$

2 When solved for x in terms of a, the solution to the equation $3x - 7 = ax + 5$ is
1) $\frac{12}{3a}$
2) $\frac{12}{3-a}$
3) $\frac{3a}{12}$
4) $\frac{3-a}{12}$

3 When the equation $6 - ax = ax - 2$ is solved for x in terms of a, and $a \neq 0$, the result is
1) $4a$
2) $\frac{4}{a}$
3) $2a$
4) $\frac{2}{a}$

4 If $ax + 3 = 7 - bx$, what is x expressed in terms of a and b?
1) $\frac{4}{ab}$
2) $-\frac{4}{ab}$
3) $\frac{4}{a+b}$
4) $-\frac{4}{a+b}$

5 If $9x + 2a = 3a - 4x$, then x equals
1) a
2) $-a$
3) $\frac{5a}{12}$
4) $\frac{a}{13}$

6 If $7x + 2a = 3x + 5a$, then x is equivalent to
1) $\frac{7a}{10}$
2) $\frac{7a}{4}$
3) $\frac{3a}{10}$
4) $\frac{3a}{4}$

7 When the equation $\frac{x-1}{2} - \frac{a}{4} = \frac{3a}{4}$ is solved for x in terms of a, the solution is
1) $\frac{3a}{2} + 1$
2) $a + 1$
3) $\frac{4a+1}{2}$
4) $2a + 1$

8 Solve the equation below for x in terms of a.
$$4(ax + 3) - 3ax = 25 + 3a$$

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Answer Section

1 ANS: 3

$2ax - 5x = 2$

$x(2a - 5) = 2$

$$x = \frac{2}{2a - 5}$$

REF: 010421a

2 ANS: 2

$3x - ax = 12$

$x(3 - a) = 12$

$$x = \frac{12}{3 - a}$$

REF: 062422ai

3 ANS: 2

$6 - ax = ax - 2$

$8 = 2ax$

$$\frac{8}{2a} = x$$

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

REF: 082420ai

4 ANS: 3

$ax + 3 = 7 - bx$

$ax + bx = 4$

$x(a + b) = 4$

$$x = \frac{4}{a + b}$$

REF: 081426ia

5 ANS: 4

$9x + 2a = 3a - 4x$

$a = 13x$

$$\frac{a}{13} = x$$

REF: 010011a

6 ANS: 4

$$7x + 2a = 3x + 5a$$
$$4x = 3a$$
$$x = \frac{3a}{4}$$

REF: 060513a

7 ANS: 4

$$\frac{x-1}{2} = a$$
$$x - 1 = 2a$$
$$x = 2a + 1$$

REF: 062223ai

8 ANS:

$$4ax + 12 - 3ax = 25 + 3a$$
$$ax = 13 + 3a$$
$$x = \frac{13 + 3a}{a}$$

REF: 081632ai