A.CED.A.4: Transforming Formulas 2

1 If $rx - st = r$, which expression represents x?
1) $\frac{r+st}{r}$
2) $\frac{r}{r+st}$
3) $\frac{r}{r-st}$
4) $\frac{r-st}{r}$

2 If $3ax + b = c$, then x equals
1) $c - b + 3a$
2) $c + b - 3a$
3) $\frac{c-b}{3a}$
4) $\frac{b-c}{3a}$

3 If $abx - 5 = 0$, what is x in terms of a and b?
1) $x = \frac{5}{ab}$
2) $x = -\frac{5}{ab}$
3) $x = 5 - ab$
4) $x = ab - 5$

4 If the formula for the perimeter of a rectangle is $P = 2l + 2w$, then w can be expressed as
1) $w = \frac{2l-P}{2}$
2) $w = \frac{P-2l}{2}$
3) $w = \frac{P-l}{2}$
4) $w = \frac{P-2w}{2l}$

5 If $2y + 2w = x$, then w, in terms of x and y, is equal to
1) $x - y$
2) $\frac{x-2y}{2}$
3) $x + y$
4) $\frac{x+2y}{2}$

6 The members of the senior class are planning a dance. They use the equation $r = pn$ to determine the total receipts. What is n expressed in terms of r and p?
1) $n = r + p$
2) $n = r - p$
3) $n = \frac{p}{r}$
4) $n = \frac{r}{p}$

7 Given $W = \frac{V^2 t}{R}$, which expression can be used to represent t in terms of W, R, and V?
1) $\frac{WR}{V^2}$
2) $\frac{W}{RV^2}$
3) $\frac{W}{R} - V^2$
4) $WR - V^2$

8 The formula for the volume of a pyramid is $V = \frac{1}{3}Bh$. What is h expressed in terms of B and V?

1) $h = \frac{1}{3}VB$
2) $h = \frac{V}{3B}$
3) $h = \frac{3V}{B}$
4) $h = 3VB$

9 A formula used for calculating velocity is $v = \frac{1}{2}at^2$. What is a expressed in terms of v and t?

1) $a = \frac{2v}{t}$
2) $a = \frac{2v}{t^2}$
3) $a = \frac{v}{t}$
4) $a = \frac{v}{2t^2}$

10 If $s = \frac{2x+t}{r}$, then x equals

1) $\frac{rs-t}{2}$
2) $\frac{rs+1}{2}$
3) $2rs-t$
4) $rs-2t$

11 If $\frac{ey}{n} + k = t$, what is y in terms of e, n, k, and t?

1) $y = \frac{tn+k}{e}$
2) $y = \frac{tn-k}{e}$
3) $y = \frac{n(t+k)}{e}$
4) $y = \frac{n(t-k)}{e}$

12 If $a + ar = b + r$, the value of a in terms of b and r can be expressed as

1) $\frac{b}{r} + 1$
2) $\frac{1+b}{r}$
3) $\frac{b+r}{1+r}$
4) $\frac{1+b}{r+b}$

13 If $k = am + 3mx$, the value of m in terms of a, k, and x can be expressed as

1) $\frac{k}{a+3x}$
2) $\frac{k-3mx}{a}$
3) $\frac{k-am}{3x}$
4) $\frac{k-a}{3x}$

14 If $z + y = x + xy^2$, what is x expressed in terms of y and z?

1) $\frac{z}{y}$
2) $\frac{z}{1+y}$
3) $\frac{z+1}{y}$
4) $\frac{z+y}{1+y^2}$

15 Solve for c in terms of a and b: $bc + ac = ab$

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Answer Section

1 ANS: 1
$rx - st = r$

$rx = r + st$

$x = \frac{r + st}{r}$

REF: 061316ia

2 ANS: 3
$3ax + b = c$

$3ax = c - b$

$x = \frac{c - b}{3a}$

REF: 080808ia

3 ANS: 1
$abx - 5 = 0$

$abx = 5$

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

REF: 011425ia

4 ANS: 2
$P = 2l + 2w$

$P - 2l = 2w$

$\frac{P - 2l}{2} = w$

REF: 010911ia

5 ANS: 2
$2y + 2w = x$

$2w = x - 2y$

$w = \frac{x - 2y}{2}$

REF: 081330ia

6 ANS: 4 REF: 011016ia

7 ANS: 1 REF: 061623ia

8 ANS: 3 REF: 081230ia

9 ANS: 2 REF: 061023ia

10 ANS: 1

$$s = \frac{2x + t}{r}$$

$$rs = 2x + t$$

$$rs - t = 2x$$

$$\frac{rs - t}{2} = x$$

REF: 011228ia

11 ANS: 4

$$\frac{ey}{n} + k = t$$

$$\frac{ey}{n} = t - k$$

$$y = \frac{n(t - k)}{e}$$

REF: 011125ia

12 ANS: 3

$$a + ar = b + r$$

$$a(1 + r) = b + r$$

$$a = \frac{b + r}{1 + r}$$

REF: 060913ia

13 ANS: 1

$$k = am + 3mx$$

$$k = m(a + 3x)$$

$$\frac{k}{a + 3x} = m$$

REF: 061215ia

14 ANS: 4

$$z + y = x(1 + y^2)$$

$$\frac{z + y}{1 + y^2} = x$$

REF: 061524ia

15 ANS:

$bc + ac = ab$

$c(b + a) = ab$

$$c = \frac{ab}{b + a}$$

REF: 081131ia