

Grade 7 - Equivalent Linear Expressions - Test Answer Key

Common Core 7.EE.A.1, 7.EE.A.2 · maths-pdf.fr/en/

Use this answer key and scoring guide to grade the equivalent expressions test. Each solution shows the full work, and the scoring note explains how the points are awarded. Give partial credit for correct steps even when the final answer is wrong.

Grade 7 · Common Core State Standards: **7.EE.A.1, 7.EE.A.2**

Question 1 - Combine like terms [2 pts]

$$(9x+2x)+(-4+10)=11x+6$$

$$11x+6$$

Scoring: 1 point for combining the x terms; 1 point for combining the constants.

Question 2 - Area model [2 pts]

$$4(x+5)=4x+20$$

$$4(x+5)=4x+20$$



$$4(x + 5) = 4x + 20.$$

Scoring: 1 point for the product; 1 point for the sum.

Question 3 - Distribute [2 pts]

$$-6y+21+5=-6y+26$$

$$-6y+26$$

Scoring: 1 point for distributing correctly; 1 point for combining constants.

Question 4 - Factor [2 pts]

The GCF of 18 and 24 is 6.

$$18x+24=6(3x+4)$$

$$6(3x+4)$$

Scoring: 1 point for the GCF; 1 point for the factored form.

Question 5 - Subtract [2 pts]

$$5x-2-3x+8=2x+6$$

$$2x+6$$

Scoring: 1 point for changing the signs; 1 point for the final expression.

Question 6 - Rational coefficients [2 pts]

$$\frac{4}{6}x-\frac{1}{6}x=\frac{3}{6}x=\frac{1}{2}x$$

$$\frac{1}{2}x$$

Scoring: 1 point for a common denominator; 1 point for the simplified result.

Question 7 - Equivalent? [2 pts]

The values of $2(x+3)$ and $2x+6$ are equal in both rows; $2x+3$ is different.

Expanding confirms $2(x+3)=2x+6$.

$2(x+3)$ **and** $2x+6$

x	$2(x+3)$	$2x+3$	$2x+6$
1	8	5	8
4	14	11	14

$2(x+3)$ and $2x+6$ agree.

Scoring: 1 point for the completed table; 1 point for the equivalent pair with a reason.

Question 8 - Rectangle [3 pts]

- a. $2w + 2(w + 8) = 4w + 16$.
- b. $4(12) + 16 = 64$ units.
- c. $5(w + 8) = 5w + 40$.



$$5(w + 8) = 5w + 40.$$

Scoring: 1 point for each part.

Question 9 - Discount and tax [3 pts]

- a. $p - 0.20p = 0.8p$
- b. $0.8p \times 1.05 = 0.84p$
- c. $0.84(60) = 50.40$ dollars.

Scoring: 1 point for each part.

Total

20 points