

Grade 7 · Equivalent Expressions · Test

Common Core 7.EE.A.1, 7.EE.A.2 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

This test has nine questions worth 20 points in total and should take about 45 minutes. Show every step. Calculators are not needed. Questions cover combining like terms, the distributive property, factoring, and writing expressions for real situations.

Test information

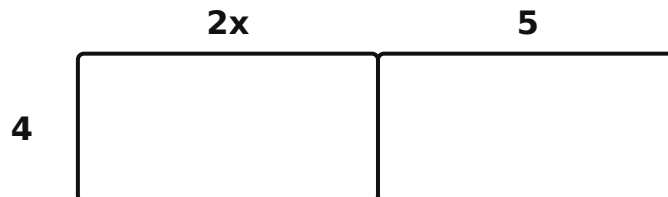
- **Grade:** Grade 7
- **Chapter:** Equivalent Expressions
- **Common Core:** 7.EE.A.1, 7.EE.A.2
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 3 pts; Question 7: 3 pts; Question 8: 2 pts; Question 9: 2 pts)

Question 1: Combine like terms (2 points)

Simplify $8a-3+5a+7$.

Question 2: Expand (2 points)

- Expand $4(2x+5)$. (1 point)
- Expand $-3(x-6)$. (1 point)



Rectangle for part (a).

Question 3: Factor (2 points)

Factor $20x-30$ completely.

Question 4: Equivalent or not (2 points)

Decide which of these expressions are equivalent to $3(2x+4)$. Justify each decision.

- a. $6x+12$
- b. $6x+4$
- c. $2(3x+6)$
- d. $5x+7$

Question 5: Subtract expressions (2 points)

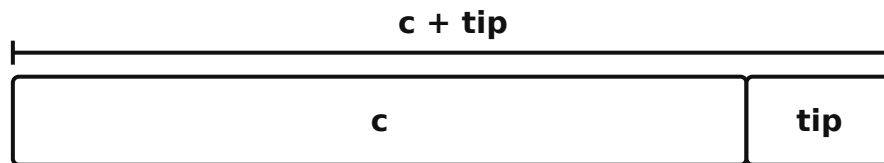
Simplify $(5x-2)-(2x-7)$.

Question 6: Fraction and decimal coefficients (3 points)

Simplify $\frac{1}{4}(8x-12)+0.5x$. Write the coefficient of x as a decimal.

Question 7: Dinner with a tip (3 points)

Priya's family leaves an 18% tip on a dinner that costs c dollars before the tip.

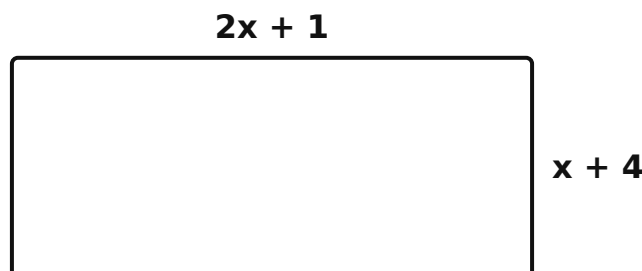


A dinner bill with an 18% tip.

- a. Write an expression for the total as one term. (1 point)
- b. Find the total when $c=40$. (1 point)
- c. The total is \$59. Find c . (1 point)

Question 8: Perimeter (2 points)

Write and simplify an expression for the perimeter of the rectangle.



Question 9: Find the error (2 points)

Ethan wrote $4(x-3) = 4x-3$. Explain his mistake and write the correct expansion.