

Solve an equation needing like terms combined first

NAME	DATE	SCORE / 10
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1 Solve for x : $3x - 13 + 5x + 1 = 28$

2 The sides of a triangle are x cm, $3x$ cm and $(x + 7)$ cm long, and its perimeter is 27 cm. The equation $x + 3x + x + 7 = 27$ shows this. What is the value of x ?

3 Noah solved $4x + 3x - 4 = 38$ in the steps below. Which step is the first one that is wrong?

Step 1: $7x - 4 = 38$

Step 2: $7x = 42$

Step 3: $x = 35$

☐ Step 1 ☐ Step 2 ☐ Step 3

4 Solve for x : $7x + 8 - 2x - 5 = -12$

5 Ben buys 4 pens and 3 notebooks, which all cost x dollars each. Ben uses a \$4 coupon and pays \$59. The equation $4x + 3x - 4 = 59$ shows this. How much does one pen cost, in dollars?

6 Ana solved $3x + 2x - 5 = 5$ in the steps below. Which step is the first one that is wrong?

Step 1: $5x - 5 = 5$

Step 2: $5x = 10$

Step 3: $x = 5$

☐ Step 1 ☐ Step 2 ☐ Step 3

7 Solve for x : $8x - 7x - 13 = -18$

8 Ivy runs x km on Monday, 4 times as far on Tuesday, and 4 km less than on Monday on Wednesday. Ivy runs 32 km in all. The equation $x + 4x + x - 4 = 32$ shows this. How many kilometres does Ivy run on Monday?

9 Solve for x : $8x - 1 + 6x = 69$

10 Solve for x : $8x + 13 + 4x - 3 = -86$

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1 5

3 Step 3

5 9

7 -5

9 5

2 4

4 -3

6 Step 3

8 6

10 -8
