

Grade 7 - Solving Two-Step Equations - Worksheet

Common Core 7.EE.B.4a · maths-pdf.fr/en/

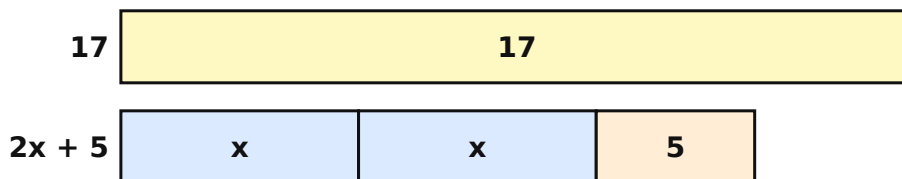
Name: _____ Class: _____ Date: ____/____/____

These 20 problems practice solving two-step equations of the forms $px + q = r$ and $p(x + q) = r$ with rational numbers, and comparing arithmetic and algebraic solutions (Common Core 7.EE.B.4a). They start with the basic skill, move to different kinds of numbers and multistep work, and end with six word problems set in everyday situations such as shopping, sports, and travel.

Show every step of your work, and use the answer key only after you have tried each problem.

Grade 7 · Common Core State Standards: **7.EE.B.4a**

Exercise 1 - Add then divide



Model of the equation.

Solve the equation. $2x + 5 = 17$

Exercise 2 - Subtract then divide

Solve the equation. $3x - 4 = 14$

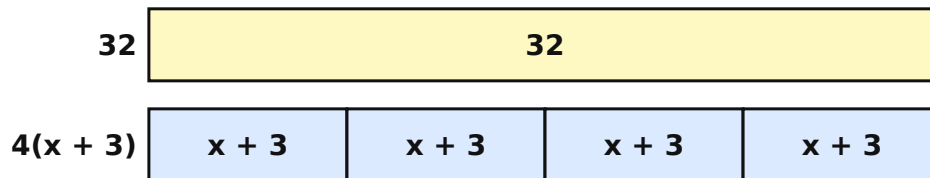
Exercise 3 - Divide by a number

Solve $\frac{x}{4} + 3 = 8$.

Exercise 4 - Negative coefficient

Solve the equation. $-5x + 2 = -18$

Exercise 5 - Distribute first or divide first



Four equal groups.

Solve the equation. $4(x+3)=32$

Exercise 6 - Negative solution

Solve the equation. $3(x-2)=-15$

Exercise 7 - Decimals

Solve the equation. $0.5x+1.2=4.7$

Exercise 8 - Fractions

Solve the equation. $\frac{1}{2}x-\frac{3}{4}=\frac{5}{4}$

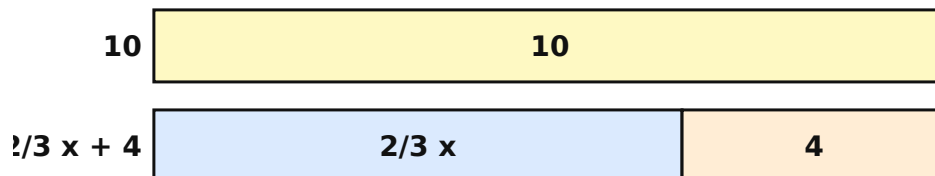
Exercise 9 - Decimals in parentheses

Solve the equation. $-2(x+1.5)=-9$

Exercise 10 - Negative divisor

Solve $\frac{x}{-3}+4=10$.

Exercise 11 - Fraction coefficient



Model of the equation.

Solve the equation. $\frac{2}{3}x+4=10$

Exercise 12 - Variable term first

Solve the equation. $-2x+7=1$

Exercise 13 - Decimal coefficient

Solve the equation. $0.3x + 4.5 = 6.3$

Exercise 14 - Fraction in parentheses

Solve the equation. $6(x + \frac{1}{2}) = 15$

Exercise 15 - Phone bill

I \$32.50

\$20 plan

0.05m

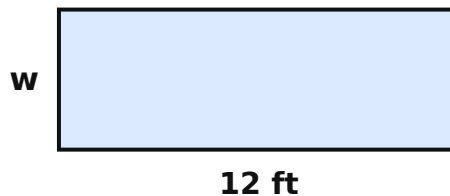
Plan fee plus minutes.

Mei's phone plan costs \$20 a month plus \$0.05 per minute. Her bill is \$32.50. Write and solve an equation to find the number of minutes m she used.

Exercise 16 - Gym membership

A gym charges a \$15 sign-up fee and \$12 per month. Aisha has paid \$99 in total. Write and solve an equation to find the number of months m .

Exercise 17 - Perimeter



A rectangle with perimeter 40 feet.

A rectangle is 12 feet long and has a perimeter of 40 feet. Use $2(12 + w) = 40$ to find the width w .

Exercise 18 - Falling temperature

The temperature is 8°F and drops 3 degrees each hour. Write and solve an equation for the number of hours h until it is -10°F .

Exercise 19 - Arithmetic and algebra

Noah buys 4 tickets with a \$5 service fee on the whole order. The total is \$53. (a) Find the price of one ticket using arithmetic. (b) Write and solve an equation for the price t .

Exercise 20 - Saving up

Diego has \$2.75 and saves \$4.50 each week. Write and solve an equation to find how many weeks w until he has \$29.75.

Exercise 21 - Number puzzle

Three times a number, decreased by 7.5, equals 12. Write and solve an equation to find the number.