Steady Steps Maths

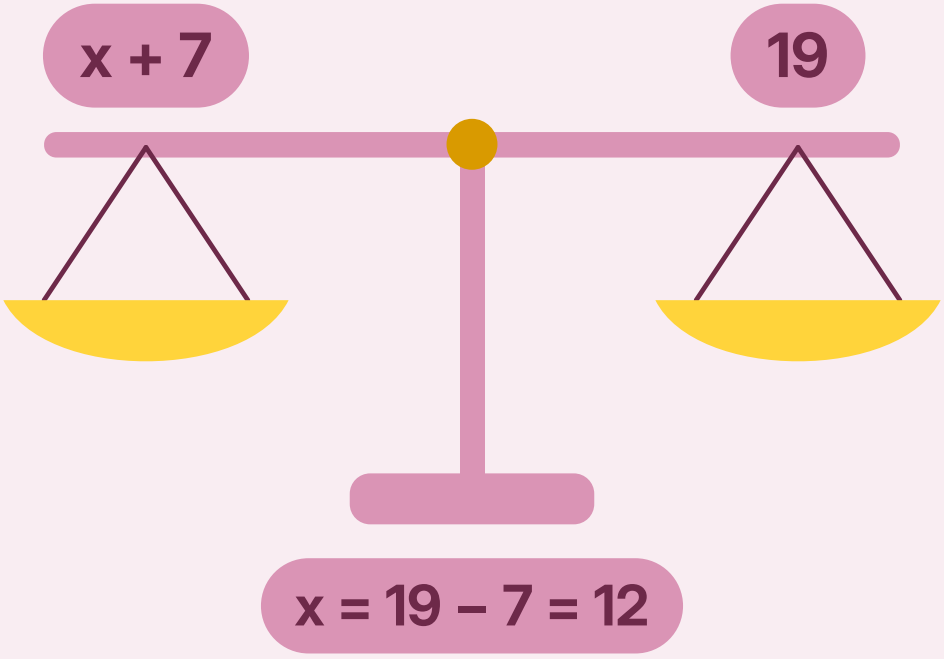
FREE SAMPLE WORKSHEET · TOPIC 9

FREE SAMPLE

Equations & Inequalities

Free sample worksheet · with answers

GRADE 6



Common Core 6.EE.B.5–8, 6.EE.C.9

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Quick recap

The big idea from each pack in this topic. Read it first, then try the questions.

Learn it · Pack 1 · Solving equations

Do the inverse operation to both sides.
x + 7 = 19 → x = 19 − 7 = **12**. 4m = 28 → m = 28 ÷ 4 = **7**.

Learn it · Pack 2 · Inequalities

> more than · < less than · ≥ at least · ≤ at most
"At least 12" → a ≥ 12: a closed circle at 12 and an arrow to the right.

Learn it · Pack 3 · Two variables

The independent variable is the one you choose; the dependent variable depends on it.
Pay of 8 per hour: p = 8h. Hours are independent, pay is dependent.

PACK 1 One-Step Equations

1. Solve x + 15 = 42.

Answer

2. Solve y − 8 = 13.

Answer

3. Solve 6n = 54.

Answer

4. Solve k ÷ 5 = 7.

Answer

5. Is n = 6 a solution of 7n = 42? Write yes or no.

Answer

6. A book costs 9 more than a pen. The book costs 14. Write and solve an equation for the price of the pen, p.

Answer

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PACK 2 Inequalities

7 Write an inequality for "at most 30 people". Use n.

Answer

8 Write an inequality for "more than 5 points". Use p.

Answer

9 Which of these are solutions of $x < 4$? 2 4 6 3.5

Answer

10 Is 10 a solution of $y \geq 10$? Write yes or no.

Answer

11 Write the inequality shown on the number line. Use x.



Answer

12 Draw $x < 3$ on the number line.



Answer

PACK 3 Variables & Relationships

13 The cost depends on the number of tickets bought. Which is the independent variable?

Answer

14 The rule is $y = 7x$. Find y when $x = 6$.

Answer

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15 Write an equation for the table.

x	1	2	3	4
y	5	10	15	20

Answer

16 Write an equation for the table.

x	2	4	6	8
y	9	11	13	15

Answer

Real life

Read carefully, then show your working

17 A plumber earns 12 for every hour he works.
(a) Write an equation for his pay p after h hours. (b) Find his pay for 7 hours.
(c) How many hours must he work to earn 96? Write and solve an equation.

Answer

18 A ride is for children who are at least 120 cm tall.
(a) Write an inequality using h for height. (b) Can a child who is exactly 120 cm tall go on? Explain.
(c) Can a child who is 115 cm tall go on? Explain.

Answer

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Answer key

For parents · check the steps as well as the final answer

Pack 1	**1)** x = 27 **2)** y = 21 **3)** n = 9 **4)** k = 35 **5)** yes (7 × 6 = 42) **6)** p + 9 = 14, p = 5
Pack 2	**7)** n ≤ 30 **8)** p > 5 **9)** 2 and 3.5 **10)** yes **11)** x ≥ −2 **12)** open circle at 3, arrow to the left
Pack 3	**13)** the number of tickets **14)** 42 **15)** y = 5x **16)** y = x + 7
Real life	**17)** (a) p = 12h (b) 84 (c) 12h = 96, h = 8 hours **18)** (a) h ≥ 120 (b) yes: “at least” includes 120 (c) no: 115 is less than 120

Tip: Ask your child to check every answer by putting it back into the equation. It takes ten seconds and catches most mistakes.

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Enjoyed this sample?

This sheet has 18 questions. The full topic has 114, plus 10 unit tests.

Everything a Grade 6 student needs on equations and inequalities: checking and solving one-step equations, writing and graphing inequalities, and describing relationships between two variables with tables, equations and graphs.

What you get	What's inside	Questions
Pack 1 · One-Step Equations	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.B.5–7	43
Pack 2 · Inequalities	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.B.5, 6.EE.B.8	40
Pack 3 · Variables & Relationships	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 6.EE.C.9	31
Complete Topic book	All 3 packs in one book with a contents page	114
10 Unit Tests (A–J)	40 marks each, about 40 minutes, with a mark scheme and a "what to revise" table. **Test A is free.**	18 per test

How to use this sample

1. Let your child read the recap page and try the questions on their own.
2. Mark together with the answer key. Each section shows which pack it comes from.
3. If a section felt hard, that pack is the place to start. If it all felt easy, try the free Unit Test A.

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