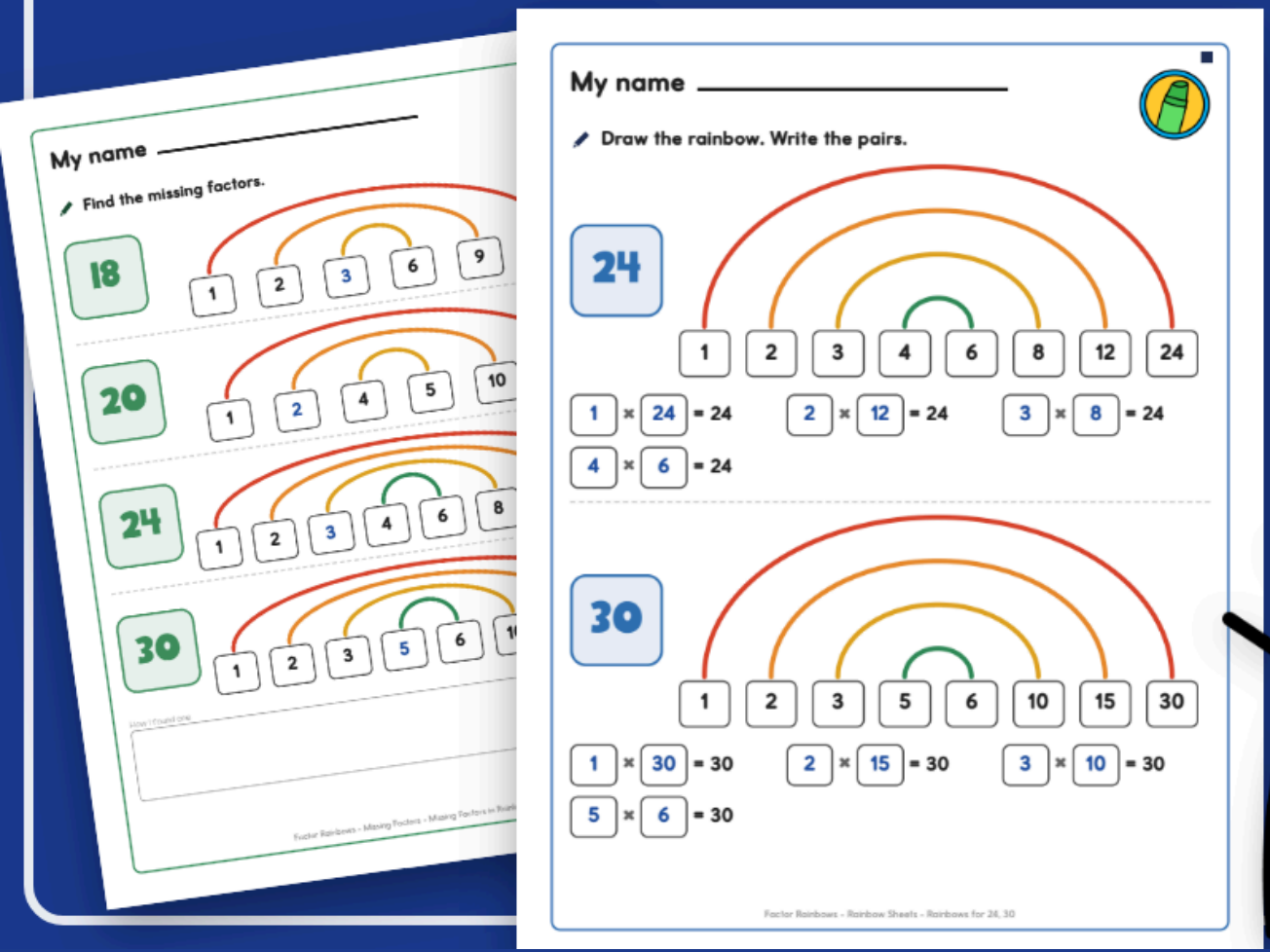
Bright Path Sped

FACTOR RAINBOWS

Find Factor Pairs
Grades 4-6

30 PAGES



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One classroom license

- This file is for one classroom: one teacher, one group of students.
- Please do not share it, post it online, or sell it.
- Extra licenses for a team or a school are available on the product page.

This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a box, type, and Save As.
- The name line, the factor boxes, the pair boxes and every answer box are type-in fields. The rainbow arcs are drawn by hand with a pencil or crayon on a printed page.
- It works offline. No account, no subscription, no internet connection needed after you download it.

Print at 100 percent

Turn off fit to page and shrink to fit so the boxes stay big enough for small hands. Every page prints in color or in black and white. In black and white the dotted trace arcs and the boxes stay dark, so a child can still follow them.

Student work

A filled-in tracker carries a student's name. Keep it in the data folder, and use a first name only on any page that leaves your hands.

Need help?

If a box will not behave or a page will not print the way you expect, use Ask a Question on the product page before leaving a review. Every question is read, and a fix to the file ships as a free update: re-download it any time from My Purchases.

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PREVIEW

My name _____



Trace the rainbow. Write the pairs.

12

1 2 3 4 6 12

☐ × ☐ = 12 ☐ × ☐ = 12 ☐ × ☐ = 12

15

1 3 5 15

☐ × ☐ = 15 ☐ × ☐ = 15

16

1 2 4 8 16

☐ × ☐ = 16 ☐ × ☐ = 16 ☐ × ☐ = 16

PREVIEW

Preview · Bright Path Sped

My name _____



Trace the rainbow. Write the pairs.

18

1 2 3 6 9 18

☐ × ☐ = 18 ☐ × ☐ = 18 ☐ × ☐ = 18

20

1 2 4 5 10 20

☐ × ☐ = 20 ☐ × ☐ = 20 ☐ × ☐ = 20

28

1 2 4 7 14 28

☐ × ☐ = 28 ☐ × ☐ = 28 ☐ × ☐ = 28

PREVIEW

My name _____



Draw the rainbow. Write the pairs.

32

1 2 4 8 16 32

□ × □ = 32 □ × □ = 32 □ × □ = 32

36

1 2 3 4 6 9 12 18 36

□ × □ = 36 □ × □ = 36 □ × □ = 36

□ × □ = 36 □ × □ = 36

PREVIEW

My name _____



Draw the rainbow. Write the pairs.

45

1 3 5 9 15 45

□ × □ = 45 □ × □ = 45 □ × □ = 45

49

1 7 49

□ × □ = 49 □ × □ = 49

PREVIEW

My name _____



Draw the rainbow. Write the pairs.

56

1	2	4	7	8	14	28	56

☐ × ☐ = 56 ☐ × ☐ = 56 ☐ × ☐ = 56

☐ × ☐ = 56

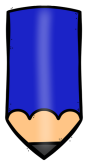
63

1	3	7	9	21	63

☐ × ☐ = 63 ☐ × ☐ = 63 ☐ × ☐ = 63

PREVIEW

My name _____



Write the factors. Draw the rainbow.

72

□ □ □ □ □ □ □ □ □ □ □ □

□ × □ = 72 □ × □ = 72 □ × □ = 72

□ × □ = 72 □ × □ = 72 □ × □ = 72

80

□ □ □ □ □ □ □ □ □ □

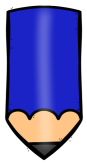
□ × □ = 80 □ × □ = 80 □ × □ = 80

□ × □ = 80 □ × □ = 80

PREVIEW

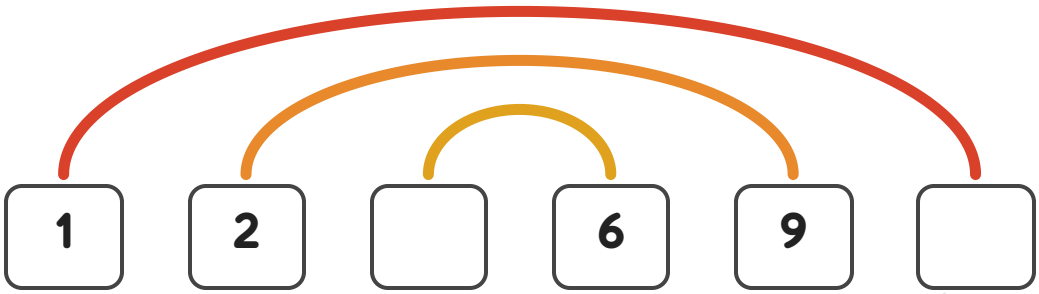
Preview · Bright Path Sped

My name _____

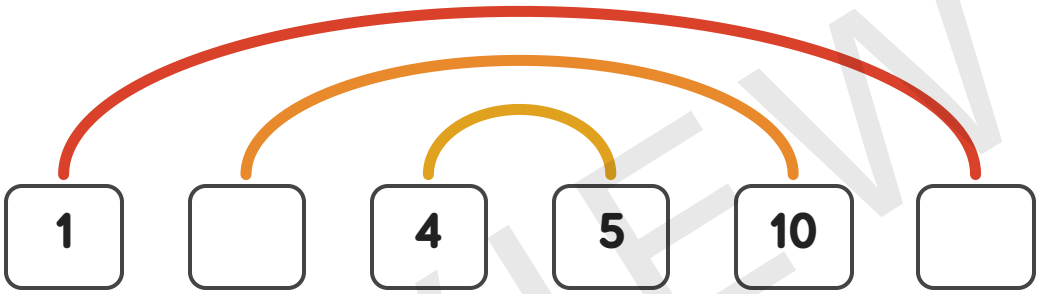


Find the missing factors.

18



20



24



30



How I found one

PREVIEW

My name _____



Find the missing factor.

1 $6 \times \square = 48$

2 $\square \times 9 = 54$

3 $7 \times \square = 56$

4 $\square \times 7 = 63$

5 $8 \times \square = 64$

6 $\square \times 9 = 72$

7 $10 \times \square = 80$

8 $\square \times 9 = 81$

9 $6 \times \square = 90$

10 $\square \times 12 = 96$

11 $25 \times \square = 100$

12 $\square \times 15 = 75$

Show my thinking

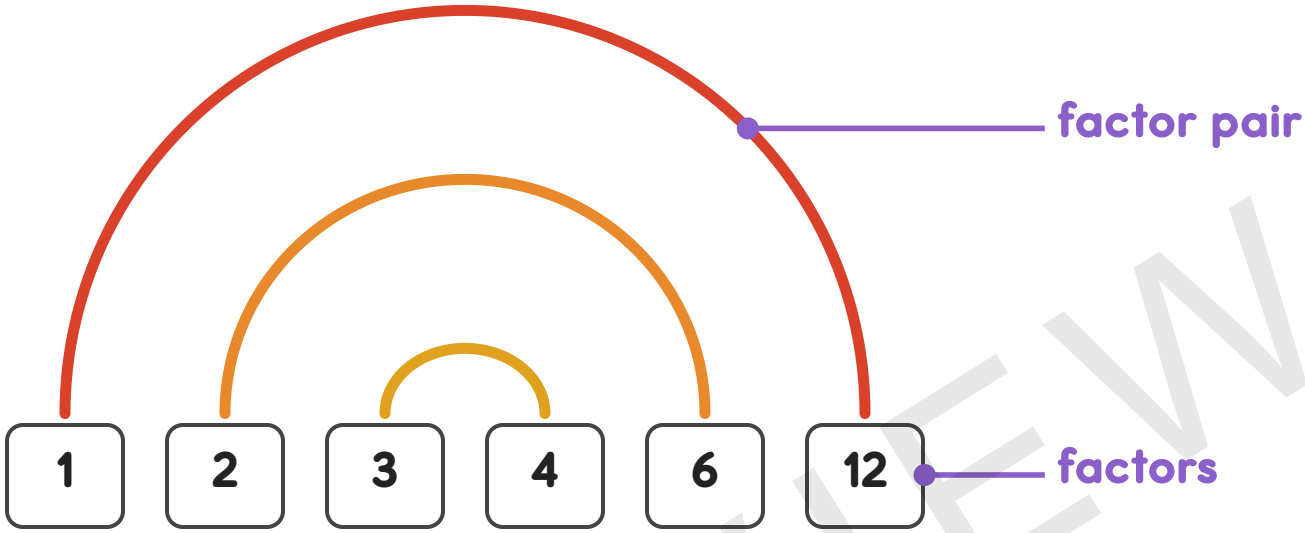
PREVIEW

My name _____



Use these words to tell about a rainbow.

The Factor Rainbow for 12



FACTOR
A number you multiply. 2 and 6 are factors of 12.

PRODUCT
The answer when you multiply. 2 × 6 = 12, so 12 is the product.

FACTOR PAIR
Two factors that make the number. 2 and 6 are a pair for 12.

Tell about this rainbow:

The factors of 12 are _____

One factor pair of 12 is _____

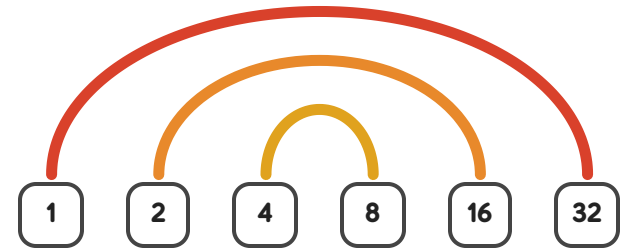
12 is the product of _____

PREVIEW

Rainbow Key 2

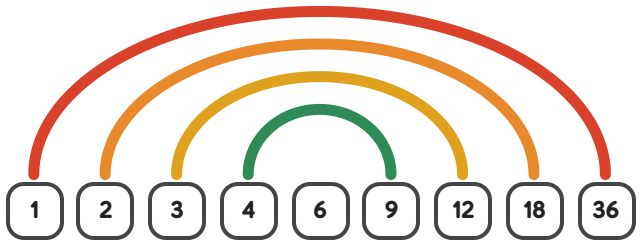
Each rainbow shows the arcs a student draws and the factor pairs it makes. A square number's middle factor has no arc.

32



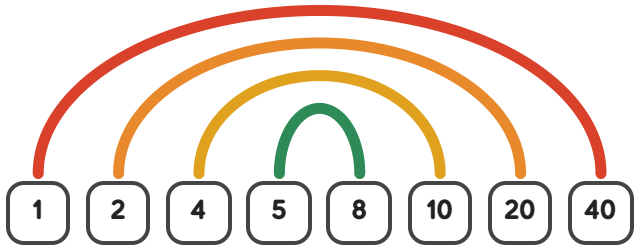
1×32 2×16 4×8

36



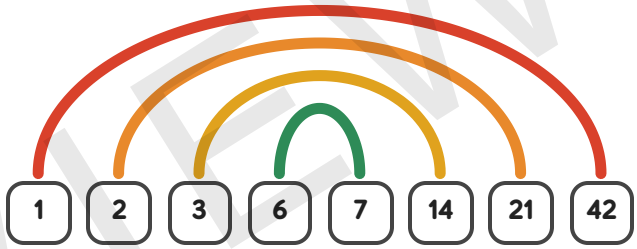
1×36 2×18 3×12 4×9 6×6

40



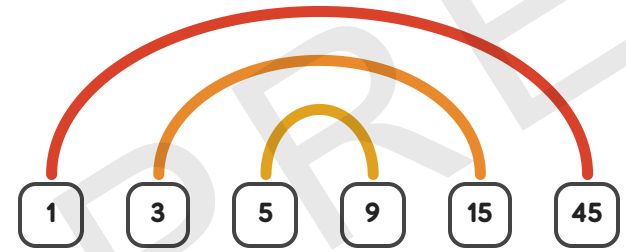
1×40 2×20 4×10 5×8

42



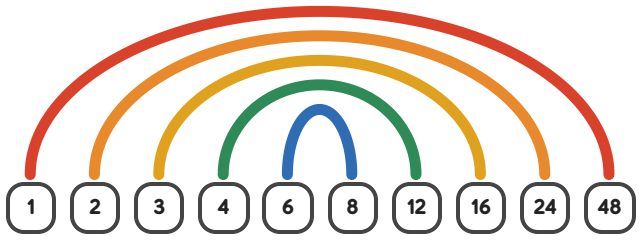
1×42 2×21 3×14 6×7

45



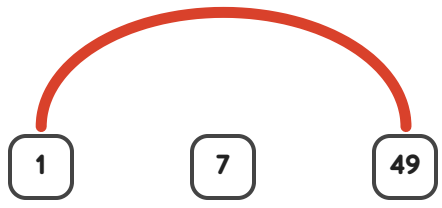
1×45 3×15 5×9

48



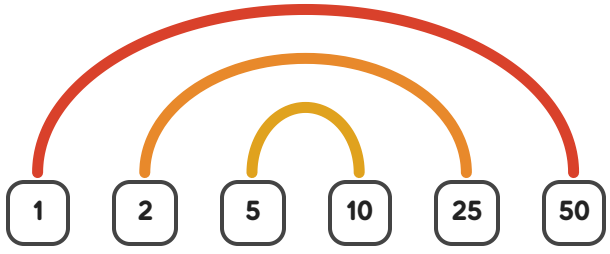
1×48 2×24 3×16 4×12 6×8

49



1×49 7×7

50



1×50 2×25 5×10

PREVIEW

Missing Factor Key

Each answer is for the problem number on its page. Hidden factors are listed with the partner that shows.

Page 15: Missing Factors in Rainbows 1

18: 18 (partner 1), 3 (partner 6)

20: 2 (partner 10), 20 (partner 1)

24: 3 (partner 8), 12 (partner 2)

30: 5 (partner 6), 30 (partner 1)

Page 16: Missing Factors in Rainbows 2

36: 2 (partner 18), 9 (partner 4), 36 (partner 1)

42: 2 (partner 21), 7 (partner 6), 42 (partner 1)

48: 3 (partner 16), 8 (partner 6), 48 (partner 1)

56: 4 (partner 14), 7 (partner 8), 56 (partner 1)

Page 17: Missing Factor Equations 1

1) 4 2) 3 3) 4 4) 3 5) 5 6) 8 7) 4 8) 6

9) 8 10) 4 11) 5 12) 9

Page 18: Missing Factor Equations 2

1) 8 2) 6 3) 8 4) 9 5) 8 6) 8 7) 8 8) 9

9) 15 10) 8 11) 4 12) 5

The pages with no key

Page 19 (pick a number) and page 20 (rainbow words) use the number your student picks or words they write, so there is no single answer. Check a pair with one multiplication: the two boxes must multiply to the number.

Questions to ask out loud

- Which factor does the arc join this one to? What do the two make when you multiply?
- How can you check your missing factor? (Multiply it by its partner. Do you get the number in the big box?)
- Why is the partner of 1 always the number itself?

PREVIEW

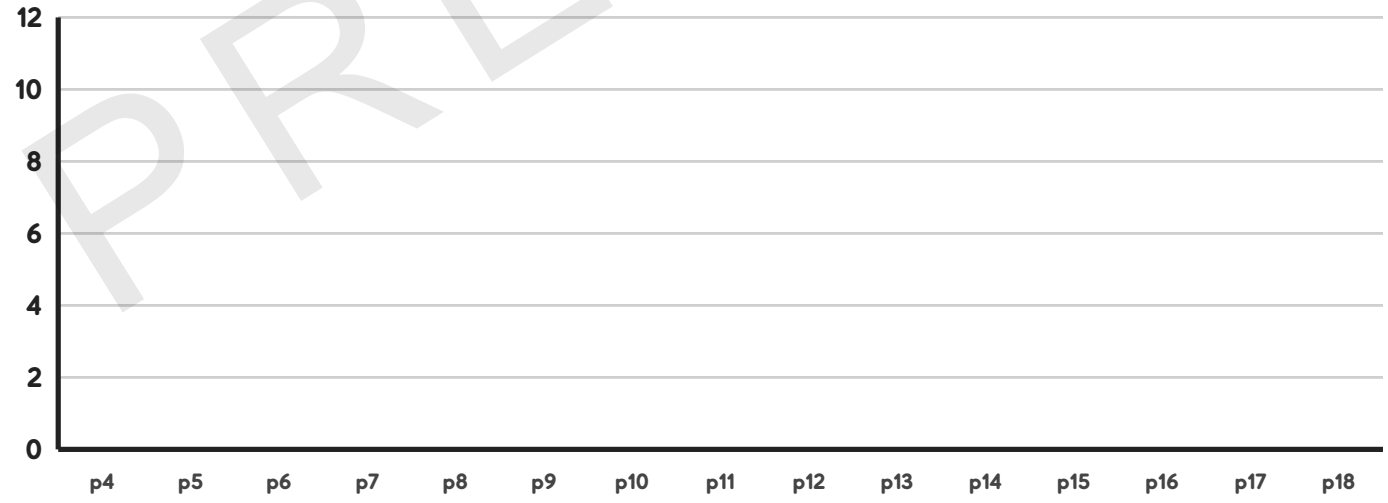
Tracker and Roll-Up

Write the date and how many were right. Then color the bar for that sheet. A blank row means not done yet, never wrong.

Student _____ Teacher _____ School year _____

Page	Sheet	Date	Right	Out of	Notes
4	Rainbows for 12, 15, 16			8	
5	Rainbows for 18, 20, 28			9	
6	Rainbows for 24, 30			8	
7	Rainbows for 32, 36			8	
8	Rainbows for 40, 42			8	
9	Rainbows for 45, 49			5	
10	Rainbows for 50, 54			7	
11	Rainbows for 56, 63			7	
12	Rainbows for 48, 64			9	
13	Rainbows for 72, 80			11	
14	Rainbows for 90, 100			11	
15	Missing Factors in Rainbows 1			8	
16	Missing Factors in Rainbows 2			12	
17	Missing Factor Equations 1			12	
18	Missing Factor Equations 2			12	

Roll-up: color one bar for each sheet, up to the number right



Notes for the team

PREVIEW

Rainbows at Home

Send this page home with a child, or hand it to a family at a conference.

Student _____ Week of _____

How to help at home, in three steps

- Look at the number in the big box. Its factors are in the row of boxes: numbers that multiply to make it.
- Draw an arc from the biggest factor to the smallest, then the next two, and keep going toward the middle.
- Say each pair out loud: "1 times 36 is 36." Then look for a pair that is the same number twice.

Our family rainbow for 36

36

1	2	3	4	6	9	12	18	36

Try saying

- "Which two numbers does this arc join? What do they make when you multiply?"
- "Why does the middle number have no arc?"

Note from the teacher

Note from home

PREVIEW