FIND MISSING TERMS

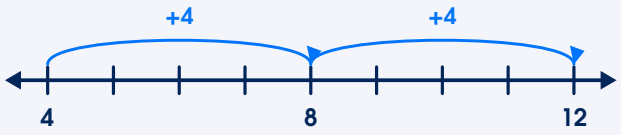
BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

KEY IDEA

When the jumps are equal, a missing term is halfway between its neighbours.

4, ?, 12: halfway between 4 and 12 is 8.



1 Fill in the missing terms.

a) 2, 4, ☐, 8, 10

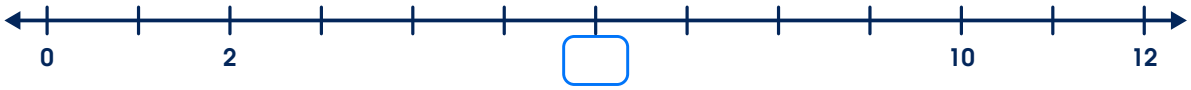
b) 15, ☐, 25, 30

c) 40, 35, ☐, 25, ☐

d) ☐, 6, 9, 12

2 The jumps are equal. Fill in the boxes on each number line.

a)



b)



3 What number is halfway between...

a) 10 and 20? ☐

b) 30 and 50? ☐

c) 6 and 8? ☐

4 A bus leaves every hour, starting at 10:00 am. Fill in the missing times.

10:00 am	11:00 am		1:00 pm	

FIND MISSING TERMS

SUPPORT

NAME _____ CLASS _____ DATE _____

KEY IDEA

Count the gaps between the terms you know.

5, ?, ?, 20 has 3 gaps. 20 – 5 = 15
and 15 ÷ 3 = 5, so add 5 each time.



1 Each sequence is linear. Find the jump, then the missing terms.

a) **4,** ☐ **, 16** jump: ☐

b) **11,** ☐ **, 19** jump: ☐

c) **25,** ☐ **, 45** jump: ☐

d) **2,** ☐ **,** ☐ **, 20** jump: ☐

2 Keep adding the jump to find the term asked for.

a) 4, 8, 12, ... What is the 6th term? ☐

b) 5, 7, 9, ... What is the 10th term? ☐

3 Max says, "In 5, ?, 17 the missing term is 12, because 17 – 5 = 12." Explain Max's mistake.

.....

The missing term is ☐

4 This linear sequence goes down. Fill in the missing terms.

30, 26, ☐ **, 18,** ☐

FIND MISSING TERMS

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

Count the jumps between two known terms of a linear sequence, then share the difference equally. For a geometric sequence think about the multiplier instead.

FLUENCY

1 Each sequence is linear. Fill in the missing terms.

a) 13, ☐, 31

b) 1.5, ☐, 3.5

c) 7, ☐, ☐, 25

d) 50, ☐, ☐, 29

e) −10, ☐, ☐, ☐, 14

2 Find the missing term in 2, ?, 18 if the sequence is...

a) linear ☐ b) geometric ☐

REASONING

3 A linear sequence starts 4, 13, ...

a) What do you add to the 2nd term to get the 4th term? ☐

b) What is the 10th term? ☐

4 Find the missing terms in this linear sequence. Explain your method.

8, ☐, ☐, ☐, 28

.....

FIND MISSING TERMS

GREATER DEPTH

NAME _____ CLASS _____ DATE _____

REASONING

1 In a linear sequence, the 3rd term is 17 and the 7th term is 37.

a) Find the 1st term. ☐ **b)** Find the 20th term. ☐

2 Is each statement always, sometimes or never true? Circle your answer.

If it is sometimes true, give an example of when it is true and when it is not.

a) If you know two terms of a linear sequence and their positions, you can find any term. ALWAYS SOMETIMES NEVER

b) In 1, ?, 9 the missing term is 5. ALWAYS SOMETIMES NEVER

c) A missing term between two terms of a linear sequence is a whole number. ALWAYS SOMETIMES NEVER

PROBLEM SOLVING

3 In each sequence, every term is the sum of the two terms before it. Find the missing terms.

a) 4, ☐, ☐, 18 **b)** ☐, ☐, 10, 16

★ CHALLENGE FOR ALL

4 A and B are linear and both start at 5. The 4th term of A is 20. The 6th term of B is 20.

a) Write the first six terms of each sequence.

A 5, ☐, ☐, ☐, ☐, ☐

B 5, ☐, ☐, ☐, ☐, ☐

b) Apart from 5 and 20, which number less than 50 is in both? ☐

FIND MISSING TERMS – ANSWERS

ANSWERS

BUILDING BLOCKS

1 a) 6 · b) 20 · c) 30, 20 · d) 3

2 a) 6 · b) 8, 11

3 a) 15 · b) 40 · c) 7

4 12:00 pm (noon), 2:00 pm

SUPPORT

1 a) 10 (jump 6) · b) 15 (jump 4) · c) 35 (jump 10) · d) 8, 14 (jump 6)

2 a) 24 · b) 23

3 There are two jumps from 5 to 17, not one: 12 ÷ 2 = 6, so the missing term is 11

4 22, 14

CORE

1 a) 22 · b) 2.5 · c) 13, 19 · d) 43, 36 · e) –4, 2, 8

2 a) 10 · b) 6

3 a) 18 · b) 85

4 13, 18, 23: there are 4 jumps; 28 – 8 = 20 and 20 ÷ 4 = 5

GREATER DEPTH

1 a) 7 · b) 102

2 a) Always · b) Sometimes (linear gives 5, geometric gives 3) · c) Sometimes (2, ?, 5 gives 3.5)

3 a) 7, 11 · b) 4, 6

4 a) A: 5, 10, 15, 20, 25, 30 · B: 5, 8, 11, 14, 17, 20 · b) 35