Varied Fluency
Step 6: Word Problems

National Curriculum Objectives:

Mathematics Year 6: (6A1) Express missing number problems algebraically
Mathematics Year 6: (6A2) Use simple formulae
Mathematics Year 6: (6A3) Generate and describe linear number sequences

Differentiation:

Developing Questions to support solving equations through word problems. Using addition and subtraction, and multiplication by 2.
Expected Questions to support solving equations through word problems. Using all four operations and whole numbers, with some decimals and fractions.
Greater Depth Questions to support solving equations through word problems. Using all four operations and whole, decimal and negative numbers and fractions.

More Year 6 Algebra resources.

Did you like this resource? Don't forget to review it on our website.

Word Problems

1a. Use the equation below to fill in the gaps in the word problem.

$p + 3 = 8$

I think of a number. I add ___ to it and my answer is ___.

D VF

Word Problems

1b. Use the equation below to fill in the gaps in the word problem.

$s - 6 = 10$

I think of a number. I subtract ___ from it and my answer is ___.

D VF

2a. In which of the options below does the unknown value equal 5?

A. $2f = 10$

B. 

C. Michael had 14 grapes. He ate some of them. He has 8 grapes left. How many grapes did Michael eat?

D VF

2b. In which of the options below does the unknown value equal 3?

A. $17 = y + 14$

B. 

C. Kiara has collected 11 models. Her mum buys her some more. Now Kiara has 16 models. How many did her mum buy?

D VF

3a. Circle the equation which matches the word problem below.

Cassi thinks of a number. She subtracts 9 from it. Her answer is 4. What was her starting number?

$4n = 9$ $n = 4 - 9$ $4 = n - 9$

D VF

3b. Circle the equation which matches the word problem below.

Judah thinks of a number. He multiplies it by 2. His answer is 14. What was his starting number?

$2n = 14$ $2 = 14n$ $n + 2 = 14$

D VF

4a. True or false? The equation matches the word problem below.

$p - 6 = 15$

There are some pencils in a pot. Ollie puts 6 more pencils in the pot. Now there are 15 pencils altogether. How many pencils were in the pot to start with?

D VF

4b. True or false? The equation matches the word problem below.

$12 - s = 3$

I had 12 stick insects. Some of them escaped. Now I have only 3 stick insects left. How many stick insects escaped?

D VF

Word Problems

5a. Use the equation below to fill in the gaps in the word problem.

$$6r = 48$$

I think of a number. I multiply it by ___ and my answer is ___.

VF

Word Problems

5b. Use the equation below to fill in the gaps in the word problem.

$$2.5 = k \div 4$$

I think of a number. I divide it by ___ and my answer is ___.

VF

6a. In which of the options below does the unknown value equal 7?

A. $4 = 24 \div h$

B. 

C. Three friends each have the same number of marbles. All together they have 21 marbles. How many do they have each?

VF

6b. In which of the options below does the unknown value equal 6?

A. $23 - j = 15$

B. 

C. Fran has 36 birthday cards. She divides them into a number of equal piles. There are 6 cards in each pile. How many piles has she made?

VF

7a. Circle the equation which matches the word problem below.

Sunia thinks of a number. She multiplies it by 5 and then adds 3. Her answer is 2.5. What was her starting number?

$5n + 3 = 2.5$ $2.5 = 3n + 5$ $5n + 3n = 2.5$

VF

7b. Circle the equation which matches the word problem below.

Will thinks of a number. He divides it by 4 and then subtracts 2. His answer is 2. What is his starting number?

$2 = 4n - 2$ $2 = n \div 2 - 4$ $2 = n \div 4 - 2$

VF

8a. True or false? The equation matches the word problem below.

$$\frac{1}{5}e = 6$$

Farmer Jones has collected his eggs. He divides them equally between 6 boxes. There are 5 eggs in each box. How many eggs did he collect in total?

VF

8b. True or false? The equation matches the word problem below.

$$4r + 5 = 15$$

Marley buys 4 rubbers. The shopkeeper gives her a 5p discount. She pays 15p. How much did each rubber cost?

VF

Word Problems

9a. Use the equation below to fill in the gaps in the word problem.

$$c \div 8 - 9 = -6$$

I think of a number. I _____ it by ___ and subtract ____. My answer is ___.

GD VF

Word Problems

9b. Use the equation below to fill in the gaps in the word problem.

$$0.3n \div 9 = 0.6$$

I think of a number. I _____ it by ___ and divide it by ____. My answer is ___.

GD VF

10a. In which of the options below does the unknown value equal 4?

A. $17.75 - w = 13\frac{1}{4}$

B.  =

C. Chloe has 170cm of pipe. She cuts it into some equal pieces. Each piece is 42.5cm long. How many pieces does she have?

GD VF

10b. In which of the options below does the unknown value equal 9?

A. $0.5y - 3 = 1.5$

B.  =

C. Tegid did a sponsored walk. When he was three quarters of the way through, he had walked 7.5km. How long was his walk in total?

GD VF

11a. Circle the equation which matches the word problem below.

Huey thinks of a number. He multiplies it by two thirds and then subtracts 1. His answer is 3. What was his starting number?

$3 - 1 = \frac{2}{3}n$ $\quad \frac{2}{3}n - 1 = 3$ $\quad 1n - \frac{2}{3} = 3$

GD VF

11b. Circle the equation which matches the word problem below.

Talia thinks of a number. She multiplies it by 0.25 and then subtracts 3. Her answer is -1. What was her starting number?

$0.25n - 3 = 1$ $\quad 0.75n - 3 = -1$ $\quad -1 = 0.25n - 3$

GD VF

12a. True or false? The equation matches the word problem below.

$$40 \div p + 2 = 12$$

Cole has 40 books. He splits them into equal piles. He adds 2 more books to one of the piles. That pile now has 12 books. How many piles does he have?

GD VF

12b. True or false? The equation matches the word problem below.

$$2 = 6 - \frac{2}{6}g$$

There are 6 cakes at a party. Every guest eats two sixths of a cake. There are two cakes left over. How many guests were at the party?

GD VF

Varied Fluency
Word Problems

Developing
1a. 3 and 8
2a. A and B
3a. 4 = n – 9
4a. False; p + 6 = 15

Expected
5a. 6 and 48
6a. C
7a. 5n + 3 = 2.5
8a. False; e ÷ 6 = 5

Greater Depth
9a. Divide, 8, 9 and -6
10a. C
11a. $\frac{2}{3}n - 1 = 3$
12a. True

Varied Fluency
Word Problems

Developing
1b. 6 and 10
2b. A
3b. 2n = 14
4b. True

Expected
5b. 4 and 2.5
6b. C
7b. 2 = n ÷ 4 – 2
8b. False; 4r – 5 = 15

Greater Depth
9b. Multiply, 0.3, 9 and 0.6
10b. A
11b. -1 = 0.25n – 3
12b. True