Name Date

BALANCING EQUATION 4B

Fill in the missing numbers to balance the equations.

1)	12	÷	3	=	10	-	___	
2)	7	+	___	=	24	÷	2	
3)	8	x	5	=	17	+	___	
4)	20	÷	4	=	19	-	___	
5)	___	-	6	=	18	÷	9	
6)	33	+	___	=	6	x	7	
7)	36	÷	4	=	13	-	___	
8)	30	-	___	=	30	÷	5	
9)	8	x	___	=	24	x	2	
10)	19	-	16	=	21	÷	___	
11)	___	-	5	=	36	÷	9	
12)	24	+	27	=	100	-	___	
13)	28	÷	2	=	___	-	13	
14)	___	x	7	=	70	-	21	
15)	14	-	___	=	40	÷	5	
16)	28	+	32	=	___	x	6	
17)	___	÷	4	=	16	÷	2	
18)	35	÷	7	=	___	-	3	

Name Date

BALANCING EQUATION 4B ANSWERS

Fill in the missing numbers to balance the equations.

1)	12	÷	3	=	10	-	6
2)	7	+	5	=	24	÷	2
3)	8	x	5	=	17	+	23
4)	20	÷	4	=	19	-	14
5)	8	-	6	=	18	÷	9
6)	33	+	9	=	6	x	7
7)	36	÷	4	=	13	-	4
8)	30	-	24	=	30	÷	5
9)	8	x	6	=	24	x	2
10)	19	-	16	=	21	÷	7
11)	9	-	5	=	36	÷	9
12)	24	+	27	=	100	-	49
13)	28	÷	2	=	27	-	13
14)	7	x	7	=	70	-	21
15)	14	-	6	=	40	÷	5
16)	28	+	32	=	10	x	6
17)	32	÷	4	=	16	÷	2
18)	35	÷	7	=	8	-	3

Determine the value of the variable.

1) $M + 43 = 38 + 46$

2) $58 - M = 3 \times 9$

3) $16 + 30 = W + 12$

4) $Y - 26 = 5 \times 3$

5) $J \times 2 = 10 \times 3$

6) $K + 4 = 17 + 42$

7) $4 \times 7 = Y \times 2$

8) $76 - P = 9 \times 8$

9) $48 + 11 = 91 - N$

10) $9 \times 6 = 23 + M$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

Determine the value of the variable.

1) M + 43 = 38 + 46

2) 58 - M = 3 × 9

3) 16 + 30 = W + 12

4) Y - 26 = 5 × 3

5) J × 2 = 10 × 3

6) K + 4 = 17 + 42

7) 4 × 7 = Y × 2

8) 76 - P = 9 × 8

9) 48 + 11 = 91 - N

10) 9 × 6 = 23 + M

Answers

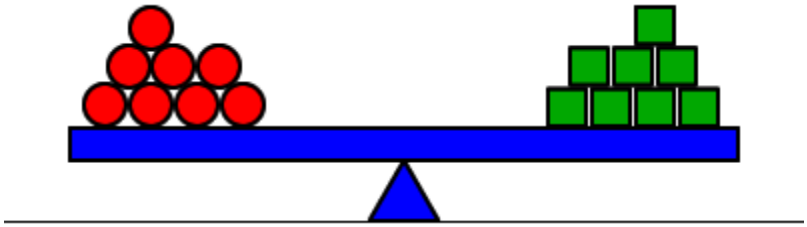
1. **41**
2. **31**
3. **34**
4. **41**
5. **15**
6. **55**
7. **14**
8. **4**
9. **32**
10. **31**

1-10	90	80	70	60	50	40	30	20	10	0

Saskatchewan Common Mathematics Assessments
Pre Assessment

Outcome: P6.2 I can show, draw, or explain the preservation of equality and check my answers.

1. Explain why this teeter-totter is balanced.

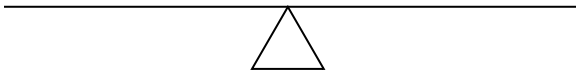


Level

1

2. Given the equation, 3+7=10, use (draw) counters on each side of the balance scale to show the preservation of equality for addition by adding 2 counters to each side.

Level 2



3. For each equation below,
   Step 1: Apply the preservation of equality by using a different operation for each question. (+, -, ×, ÷)
   Step 2: Verify each of your answers to show whether or not equality was preserved.

Level 3&4

   a. 5b=15 (use addition +)

   b. t=8 (use division ÷)

   c. 14=7z (use multiplication ×)

   d. 6=2r (use subtraction -)

4. Are these equations equal? Verify each equation and explain your reasoning.

Level 3

   a. $8=4t$

   b. $8+1=4t+1$

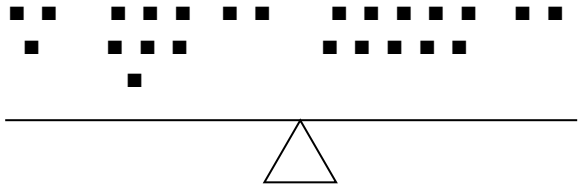
   c. $4(2)+1=2(2t)+1$

Teacher Section

Teacher Notes:

Student answers may vary considerably.

Answer Key:

Question	Indicator	Level	Answer
1		1	It is balanced because the number on each side is the same even though some are circles and some are squares.
2	P6.2 a	2	Student representations may vary 
3 a	**P6.2 a, b**	3 – step 1 4 step 2	Student answers will vary considerably. Step 1 is to apply preservation of equality, Step 2 is to check the answer. 5b=15 b=15/5 b=3 (addition) so, **5b+3 = 15 +3** 5(3) + 3 = 15+3 15+3=18 **18=18**
3 b	**P6.2 a, b**	3 Step 1 4 step 2	Student answers will vary considerably. Step 1 is to apply preservation of equality, Step 2 is to check the answer. t=8 (division) So, **t÷2 = 8 ÷2** 8÷2=8÷2 **4=4**
3 c	**P6.2 a, b**	3 step 1 4 step 2	Student answers will vary considerably. Step 1 is to apply preservation of equality, Step 2 is to check the answer. 14=7z 2=z (multiplication) **14×2 = 7z ×2** 28=7(2)×2 **28=28**

3 d	**P6.2 A, b**	3 step 1 4 step 2	Student answers will vary considerably. Step 1 is to apply preservation of equality, Step 2 is to check the answer. 6=2r 3=r (subtraction) **6-1=2r-1** 5=2(3)-1 **5=5**
4	**P6.2 b**	3	8=4t 2=t So 8=4(2) 8=8 8+1=4t+1 9=4t+1 8=4t 2=t So 9=4(2)+1 9=9 4(2)+1=2(2t)+1 8+1=4t+1 9=4t+1 8=4t 2=t So 4(2)+1=2(2)(2)+1 8+1=8+1 9=9 No, the 3 equations are not equal. B and C are equal to 9, but a is equal to 8. As a result, not all are equal equations.