AIS

Working with Signed Numbers

Let's work with signed numbers.

9.1

Worked Example: Multiplying Rectangles

Solve $14 \cdot 8$ using a diagram.

Step 1:

	10	4
10		
-2		

Step 2:

	10	4
10	100	40
-2	-20	-8

Step 3:

$$100 + 40 - 20 - 8 = 112$$

9.2 Expanded Form

For each expression given in factored form, write two equivalent expressions in expanded form. If you get stuck, draw a diagram to represent the product. Some blank diagrams are provided—draw additional diagrams as needed.

1.
$$(30+3)(30-2)$$

2.
$$(20-1)(20-1)$$

3.
$$(100 + 5)(100 - m)$$

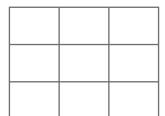
4.
$$(40 - a)(40 + b)$$

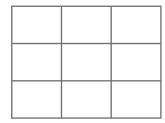
5.
$$y(11 - y)$$

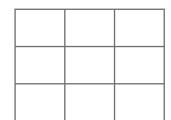
6.
$$-7(3a - 1)$$

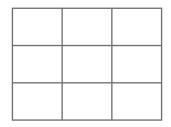
7.
$$\frac{1}{4}(-8a + 12a)$$

8.
$$-x(3x - 5)$$



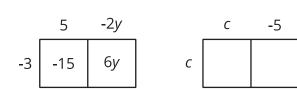






9.3 Factoring and Expanding

In each row, write the equivalent expression. If you get stuck, use a diagram to organize your work. The first row is provided as an example. Diagrams are provided for the first three rows.



4	8 <i>a</i>	-4b

factored	expanded
-3(5-2y)	-15 + 6y
c(c-5)	
	8a-4b
-3(2w-7z)	
-(3y-2x)	
	$12x - 14x^2$
n(3-10)	
	5y - 7y
-5x(y-2z)	
	tw - tv - 5tz
-a(2b-4c+a)	