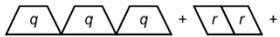
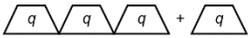
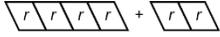


Activity 7 Assessment

Investigating Algebraic Properties

Variables and Equations			
<p>Evaluates a numerical expression using the order of operations.</p> $80 \div 5 \times (2 + 3) - 23$ $= 80 \div 5 \times 5 - 23$ $= 80 \div 5 \times 5 - 8$ $= 16 \times 5 - 8$ $= 80 - 8$ $= 72$ <p>“I have to do the operation in parentheses first, then the power, then the multiplication and division in the order they appear, and then the subtraction.”</p>	<p>Models an algebraic expression and combines like terms.</p> $3q + 2r + 4r + q$     <p>“$3q + 2r + 4r + q = 4q + 6r$”</p>	<p>Uses algebraic properties to rearrange terms in an algebraic expression.</p> $6(b + 3) + 7b$ $= 6 \times b + 6 \times 3 + 7b$ $= 6b + 18 + 7b$ $= 6b + 7b + 18$ <p>“I used the distributive property to eliminate the parentheses, then I used the commutative property to rearrange the terms.”</p>	<p>Simplifies algebraic expressions by combining like terms.</p> $6(b + 3) + 7b$ $= 6 \times b + 6 \times 3 + 7b$ $= 6b + 18 + 7b$ $= 6b + 7b + 18$ $= 13b + 18$ <p>“$6b$ and $7b$ are like terms so I can add them.”</p>
Observations/Documentation			

Activity 7 Assessment

Investigating Algebraic Properties

Variables and Equations (cont'd)			
<p>Simplifies expressions on both sides of an equation.</p> $2(3d + 4) - 1 = 100 \div 4$ $6d + 2 \times 4 - 1 = 25$ $6d + 8 - 1 = 25$ $6d + 7 = 25$ <p>“I used algebraic properties to simplify the expressions on both sides of the equation. Now I have an equation with two operations.”</p>	<p>Solves equations involving one or two operations using different strategies.</p> $6d + 7 = 25$ $6d + 7 = 18 + 7$ <p>So, $6d = 18$</p> <p>“I used a balance model. Then, I know $6 \times 3 = 18$, so $d = 3$.”</p>	<p>Verifies the solution to an equation.</p> $2(3d + 4) - 1 = 100 \div 4$ $6d + 7 = 25$ <p>To check, substitute $d = 3$.</p> $\text{Left side} = 2(3d + 4) - 1$ $= 2(3 \times 3 + 4) - 1$ $= 2(13) - 1$ $= 26 - 1$ $= 25$ <p>Right side = $100 \div 4$ = 25</p> <p>“Since the left side equals the right side, my solution is correct.”</p>	<p>Flexibly works with equations to solve problems using a variety of strategies.</p> <p>Ava rents a bicycle to ride around the city. There is a flat fee of \$10, plus \$3 per hour. Ava pays a total of \$28. For how many hours did Ava rent the bicycle?</p> $10 + 3n = 28, \text{ where } n \text{ is the number of hours that Ava rented the bicycle.}$ $10 - 10 + 3n = 28 - 10$ $3n = 18$ $n = 6$ <p>“I know $3 \times 6 = 18$, so $n = 6$. Ava rented the bicycle for 6 hours.”</p>
Observations/Documentation			