## Unit 7 Lesson 4: Equations and Their Zeros

### 1 Math Talk: Equations with Zero (Warm up)

#### Student Task Statement

Mentally find a value for $a$ that will make the equation true.

$4a=0$

$3⋅0=14a$

$0⋅a=0$

$ab=0$ with $b\ne 0$

### 2 Evaluating Quadratic Equations

#### Student Task Statement

1. Evaluate each function for $x=6$.
	1. $f\left(x\right)=\left(x+4\right)\left(x−6\right)$
	2. $g\left(x\right)=\left(x−6\right)\left(x+6\right)$
	3. $h\left(x\right)=x^{2}−6x$
	4. $j\left(x\right)=2\left(\frac{2}{3}x+8\right)\left(x−6\right)$
	5. $k\left(x\right)=0.5x^{2}−3x$
2. What do these functions have in common?
3. For each function, find another value of $x$ that would give the same output as you found earlier.

### 3 Card Sort: Matching Equation Forms

#### Student Task Statement

Your teacher will give you a set of cards. Match each function in standard form with an equivalent function in factored form.



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