## Situation Cards Key

Note: Students may represent a variable with any letter.

1. $7.50 \mathrm{~h}=\mathrm{p}$ where $\mathrm{h}=$ hours worked and $\mathrm{p}=$ payment.
$7.50 \times 4=\$ 30$ for 4 hours.
$7.50 \times 5.5=\$ 41.25$ for 5.5 hours.
2. $4 \mathrm{p}+12=32$ where $\mathrm{p}=$ price of tickets.
$\mathrm{p}=\$ 5$ per ticket.
$5 \times 2=\$ 10$ per couple.
3. This answer will vary based on class size. The following uses a class size of 28 .
$.5 s=12.50$ where $s=$ number of students.
$28 \times .5=12.50$
Students should reason that since half of 28 is 14 , they would be $\$ 2.50$ short and therefore unable to buy each child a candy bar.
4. $8 p+p=50$ OR $9 p=50$ OR $8 p+1 p=50$ where $p=$ price of ticket.

For 6 siblings, you would spend $\$ 54$, which is $\$ 4$ too expensive.
For 5 siblings, you will spend $\$ 48$, which leaves $\$ 4$ left over.
Angie can take 4 siblings with you, or let her 5 siblings go to the movie while she stays home. Even better, her dad may give her an extra $\$ 4$ !
5. $30+2 \mathrm{~h}=\mathrm{t}$ where $\mathrm{h}=$ hours and $\mathrm{t}=$ temperature.
$30+2 \mathrm{~h}=55 . \mathrm{h}=12.5$ hours
6. $84 \mathrm{~b}=180$ where $\mathrm{b}=$ number of busses.
$180 / 84=2.14$ busses, so you will need 3 busses for the field trip.
$180 / 3$ busses $=60$ people on each bus.
7. $\mathrm{p}=$ payment earned and $\mathrm{m}=$ miles walked

Ashley's plan $\mathrm{p}=10$. For 8 miles, $\mathrm{p}=\$ 10$.
Caroline's plan $\mathrm{p}=3 \mathrm{~m}$. For 8 miles, $\mathrm{p}=\$ 24$.
Donnie's plan $\mathrm{p}=5+1 \mathrm{~m}$. For 8 miles, $\mathrm{p}=\$ 13$.
Caroline's plan will bring in the most money.
T-shirt equation using Caroline's plan: $\mathrm{p}=3 \mathrm{~m}-5$.
8. $\mathrm{c}=$ cost and $\mathrm{h}=$ hours worked.
$\mathrm{c}=75 \mathrm{~h}$.
For 2.5 hours, $\mathrm{c}=\$ 187.50$.
$\mathrm{c}=100+20 \mathrm{~h}$
For 2.5 hours, $c=\$ 150.00$.
$c=150+30 h$
For 2.5 hours, $\mathrm{c}=\$ 225.00$.
Emily's mom should hire Dante Fantasio for $\$ 150.00$.
9. Plan A: $250=10.50 \mathrm{w}$ where $\mathrm{w}=$ weeks.

Plan B: $250=120+5 x$.
After 12 weeks, Natalie will have paid $\$ 126$ on plan A and $\$ 180$ on plan B, which means she still owes $\$ 124$ on plan A and $\$ 70$ on plan B.
After working the two-step equation, it will take 23.8 (or about 24) weeks to pay off plan A and 26 weeks to pay off plan B. Plan A takes the least amount of weeks to pay off.

