

A.CED.A.3: Modeling Linear Inequalities

- 1 An electronics store sells DVD players and cordless telephones. The store makes a \$75 profit on the sale of each DVD player (d) and a \$30 profit on the sale of each cordless telephone (c). The store wants to make a profit of at least \$255.00 from its sales of DVD players and cordless phones. Which inequality describes this situation?
 - 1) $75d + 30c < 255$
 - 2) $75d + 30c \leq 255$
 - 3) $75d + 30c > 255$
 - 4) $75d + 30c \geq 255$

- 2 David has two jobs. He earns \$8 per hour babysitting his neighbor's children and he earns \$11 per hour working at the coffee shop. Write an inequality to represent the number of hours, x , babysitting and the number of hours, y , working at the coffee shop that David will need to work to earn a minimum of \$200. David worked 15 hours at the coffee shop. Use the inequality to find the number of full hours he must babysit to reach his goal of \$200.

A.CED.A.3: Modeling Linear Inequalities
Answer Section

1 ANS: 4 REF: fall0715ia

2 ANS:

$$8x + 11y \geq 200 \quad 8x + 11(15) \geq 200$$

$$8x + 165 \geq 200$$

$$8x \geq 35$$

$$x \geq 4.375$$

5 hours

REF: fall1309ai