## Core Focus: Graphs of Proportional Relationships

## Pages 124-125

1. (a) Determine the amount of money that Taylor paid per ounce: $\frac{375.4}{0.4}=938.5$. Taylor paid $\$ 938.50 / \mathrm{oz}$. Determine the amount of money that Jillian paid per ounce: $\frac{768.6}{1.05}=732$. Jillian paid $\$ 732 /$ oz.
(b)

(c)

(d) The slope of the line representing Taylor's possible expenditures is 938.5 , or $\$ 938.50$, which represents the cost per ounce of 18 -karat gold. The slope of the line representing Jillian's possible expenditures is 732 , or $\$ 732$, which represents the cost per ounce of 14-karat gold.
(e) The line representing Taylor's possible expenditures is much steeper than the line representing Jillian's possible expenditures. In this situation, the steeper the slope, the greater
the cost per ounce for the gold being purchased. Therefore, the gold that Taylor is purchasing costs more per ounce than the gold that Jillian is purchasing.
2. (a) Divide $\$ 15.56$ by 4 lb : $\frac{15.56}{4}=3.89$. The cost per pound is $\$ 3.89$.
(b) Let $x$ represent the number of pounds Ryan can buy for $\$ 1$. Set up a ratio of pounds to dollars and solve for $x: \frac{x}{1}=\frac{1}{3.89} ; 3.89 x=1 ; x \approx 0.26$. Ryan can buy approximately 0.26 lb for $\$ 1$.
(c)

(d) The slope of the line in Part (c) represents the price per pound of the peanuts that Ryan bought.
(e)

(f) The slope of the line in Part (e) represents the number of pounds of peanuts that can be purchased per dollar.
