Name:
Date: $\qquad$
$\qquad$
Graph each of the following and then solve the puzzle. Show all work on a separate sheet of paper.


0


a




## 4




国



(6)


State the rate of change for each graph and then solve the puzzle.
What Does It Take to Win a Tug of War?
Find the rate of change represented by each line (some answers are rounded). Cross out the letters above each correct answer. Write the remaining letters in the spaces at the bottom of the page.

rate of change: $\qquad$

butter: $\qquad$ cream cheese: $\qquad$

rate for talk time
over $\mathbf{4 0 0} \mathrm{min}$ :

rate of change: $\qquad$

plant $A$ : $\qquad$
plant $B$ : $\qquad$

rate for printer A: rate for printer B :

flow rate (A): $\qquad$
flow rate (B): $\qquad$


12 " candle: $\qquad$ 8" candle: $\qquad$

rate for first 4 h : $\qquad$ rate for next 8 h : $\qquad$

| $\mathbf{T H}$ | $\mathbf{G R}$ | $\mathbf{A B}$ | $\mathbf{E}$ | $\mathbf{S T}$ | $\mathbf{U N}$ | $\mathbf{E A}$ | $\mathbf{C H}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $25 \mathrm{cal} / \mathrm{oz}$ | $-10^{\circ} \mathrm{F} / \mathrm{h}$ | $4^{\circ} \mathrm{F} / \mathrm{h}$ | $\$ 0.33 / \mathrm{poster}$ | $20 \mathrm{gal} / \mathrm{min}$ | $\$ 0.45 / \mathrm{min}$ | $0.5 \mathrm{in} . / \mathrm{wk}$ | $40 \mathrm{cal} / \mathrm{oz}$ |
| $\mathbf{S}$ | $\mathbf{O F}$ | $\mathbf{L O}$ | $\mathbf{B I}$ | $\mathbf{T U}$ | $\mathbf{G}$ | $\mathbf{E T}$ | $\mathbf{O O}$ |
| $40 \mathrm{mi} / \mathrm{h}$ | $-62 \mathrm{mi} / \mathrm{h}$ | $-2.4 \mathrm{in} . / \mathrm{h}$ | $0.8 \mathrm{in} . / \mathrm{wk}$ | $2.5^{\circ} \mathrm{F} / \mathrm{h}$ | $35 \mathrm{mi} / \mathrm{h}$ | $\$ 0.35 / \mathrm{min}$ | $-50 \mathrm{mi} / \mathrm{h}$ |
| $\mathbf{J}$ | $\mathbf{A M}$ | $\mathbf{E X}$ | $\mathbf{E R}$ | $\mathbf{P U}$ | $\mathbf{L L}$ | $\mathbf{K S}$ | $\mathbf{E}$ |
| $-1.5 \mathrm{in} . / \mathrm{h}$ | $\$ 0.50 /$ poster | $50 \mathrm{cal} / \mathrm{zz}$ | $15 \mathrm{gal} / \mathrm{min}$ | $1 \mathrm{in} . / \mathrm{wk}$ | $-1.33 \mathrm{in} . / \mathrm{h}$ | $\$ 0.40 / \mathrm{poster}$ | $13.3 \mathrm{gal} / \mathrm{min}$ |

