Baseball Jerseys

Bill wants to order new jerseys for his baseball team.

He sees the following advertisements for two printing companies, 'PRINT IT' and 'TOP PRINT'.

Bill doesn't know which company to choose.

PRINT IT

Get your baseball jerseys printed with your own team names here.

Only $21 per jersey.

TOP PRINT

We will print your baseball jerseys - just supply us with your design.

Pay a one-off setting up cost of $45; we will then print each jersey for only $18!

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1. Give Bill some advice on which company he should buy from. When should he choose 'PRINT IT'? When should he choose 'TOP PRINT'? Explain your answer fully.

Remember, back up your statement with figures that confirm your reasoning.

2. A third company called 'VALUE PRINTING' wants to start trading.

It wants its prices to be between those of 'PRINT IT' and 'TOP PRINT'.

This company never wants to be the most expensive and never wants to be the cheapest.

Can you complete this poster for the new company?

VALUE PRINTING

We print baseball jerseys.

Pay a one-off set up cost of $.................

Then each jersey will cost $...................

Show and/or explain how you dtermine the jersey costs for your poster.

Bill's friends Danny, Jeremiah, Bella and Tanya want to help him decide on the best deal for the baseball jerseys. They each give Bill their choice for which company to use and why. Analyze each of their decisions as well as eac reasoning process.

Sample Responses to Discuss: Danny

Number of Jerseys	Cost at 'Print it'	Cost at Top Print
5	$105	$135
10	$210	$245
15	$315	$315 ←
20	$430	$405
16	$336	$333

Top Print cheaper more than 15 jerseys.

What mistakes have Danny made? Describe the mistakes and then make corrections.
In what ways would Danny's mistakes affect his advice to Bill?
Why has Danny calculated the cost of 16 jerseys?
How could Danny's work be improved?

Sample Responses to Discuss: Jeremiah

Print it cost $21n

Top print cost $45+18n

$$21n = 45 + 18n$$
$$3n = 45$$
$$n = 15$$

n = 16 print it $336 Top Print $333

Where does Jeremiah get the equation '21n = 45 + 18n' from?	
Is Jeremiah's solution complete?	
In what ways could Jeremiah's work be improved?	
To help you to understand Jeremiah's work, what question(s) could you ask him?	

Sample Responses to Discuss: Bella

> He would have to buy 15 jerseys
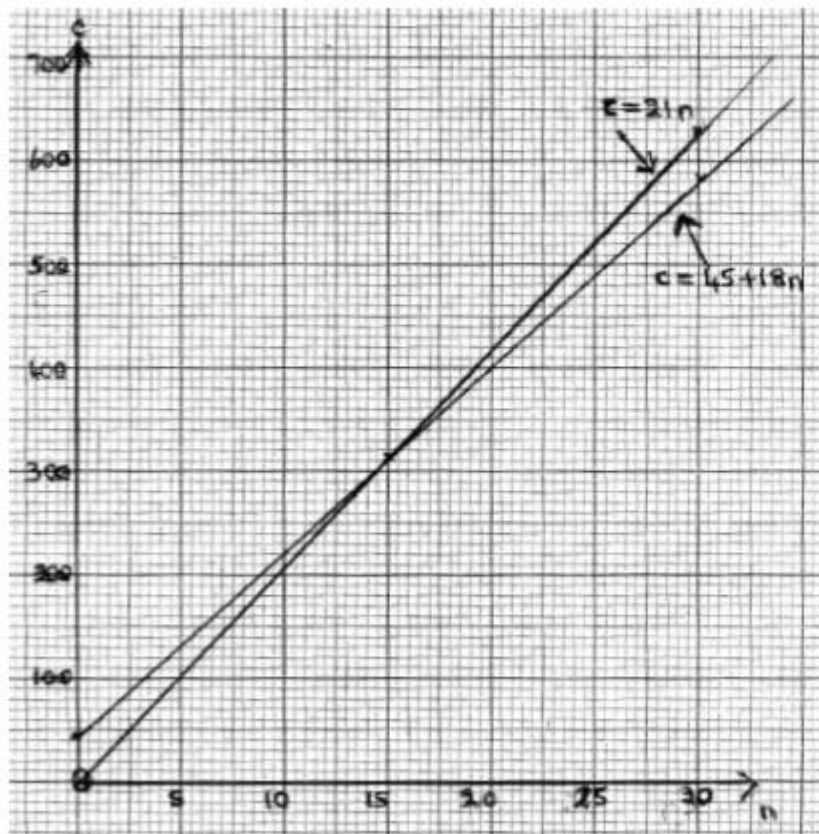> to get the $45 set up cost gone.
> Then Top Print $3 cheaper.

Is Bella's reasoning correct? Explain your answer.
What does Bella mean by '$3 cheaper'?
In what ways could Bella's work be improved?
To help you to understand Bella's work, what question(s) could you ask her?

Sample Responses to Discuss: Tanya

What is not clear about Tanya's work?

In what ways could Tanya's work be improved?

To help you to understand Tanya's work, what question(s) could you ask her?