Printing Tickets

T1

Susie is organizing the printing of tickets for a show.

She has collected prices from several printers and these two seem to be the best.

SURE PRINT
Ticket printing
25 tickets for $2

BEST PRINT
Tickets printed
$10 setting up
plus
$1 for 25 tickets

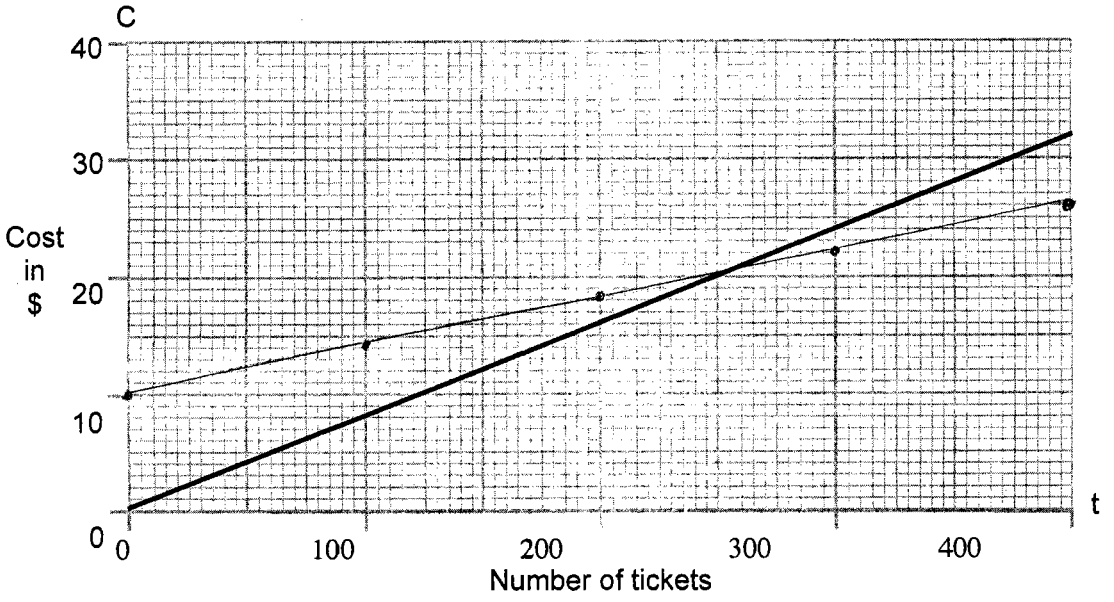
1. Using **C** for the cost of the printing and **t** for the number of tickets, Susie writes a formula for each of the printers. Here is her formula for *Sure Print*:

   Sure Print $C = \frac{2t}{25}$

   Write the formula for Best Print:

   Best Print $C = 10 + \frac{1t}{25}$

2. Susie's brother Rob has drawn *Sure Print*'s graph on a grid.
   Draw the graph for *Best Print*.



T1

3. Susie uses algebra to find the values of C and t when the cost of printing the tickets is the same for both of the printers.

C = $20 t = 250

Show how Susie may have calculated C and t.

$25\left(\frac{2t}{25}\right) = \left(10 + \frac{t}{25}\right)25$

$2t = 250 + t$

$t = 250$

$C = \frac{2(250)}{25} = \frac{500}{25} = 20$

4. What do Rob's graphs and Susie's calculations tell us about the cost of the tickets? Which company should Susie choose under what circumstances?

For Sure Prints, the price is cheaper at first but eventually gets higher than the Best Prints. Susie should choose Sure Prints if she wants fewer amounts of tickets, and choose Best Print if she needs a great amount of tickets

Printing Tickets

T2

Susie is organizing the printing of tickets for a show.

She has collected prices from several printers and these two seem to be the best.

SURE PRINT
Ticket printing
25 tickets for $2

BEST PRINT
Tickets printed
$10 setting up
plus
$1 for 25 tickets

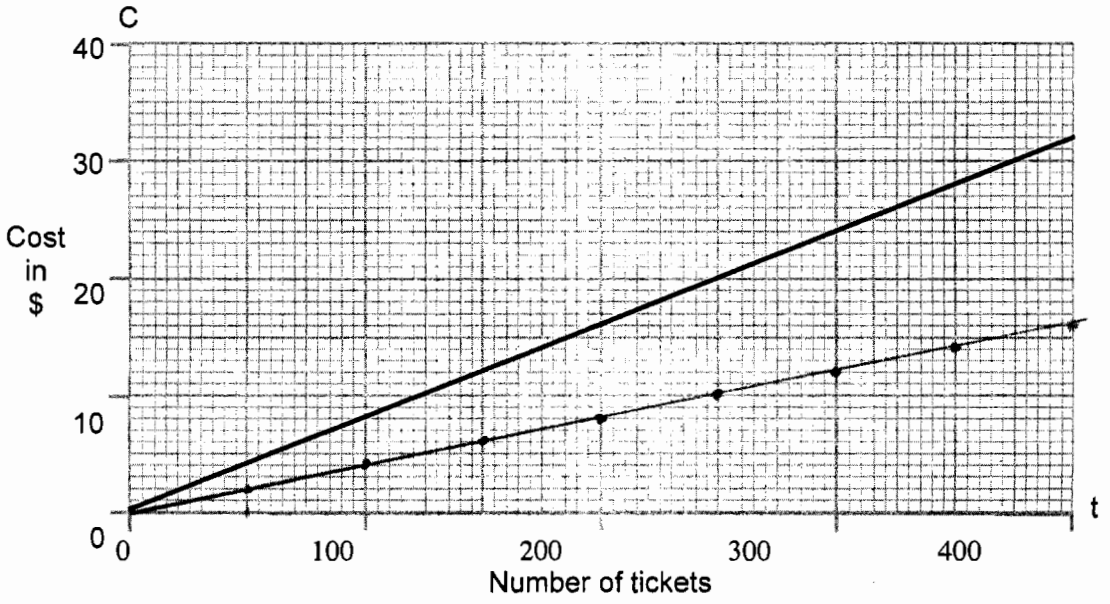
1. Using **C** for the cost of the printing and **t** for the number of tickets, Susie writes a formula for each of the printers. Here is her formula for *Sure Print*:

   Sure Print $C = \frac{2t}{25}$

   Write the formula for Best Print:

   Best Print $C = \frac{t}{25}$

2. Susie's brother Rob has drawn *Sure Print*'s graph on a grid.
   Draw the graph for *Best Print.*



T2

3. Susie uses algebra to find the values of C and t when the cost of printing the tickets is the same for both of the printers.

C = 20 t = 250

Show how Susie may have calculated C and t.

$2(25x) = 25x + 10$

$50x = 25x + 10$

$25x = 10$

$x = \frac{10}{25}$

$x = .4$

$2(25(.4)) = 25(.4) + 10$

$\$20 = \$20$

$20 \div 10 = 2$

$25 \cdot 10 = 250$

4. What do Rob's graphs and Susie's calculations tell us about the cost of the tickets? Which company should Susie choose under what circumstances?

She should choose Best Print if she wants many copies (over 250 tickets). But if she only wants less than 250 tickets, then choose Sure Print.

Printing Tickets

T3

Susie is organizing the printing of tickets for a show.

She has collected prices from several printers and these two seem to be the best.

SURE PRINT
Ticket printing
25 tickets for $2

50 ticks $4

BEST PRINT
Tickets printed
$10 setting up
plus
$1 for 25 tickets

$2 50 ticks

1. Using **C** for the cost of the printing and **t** for the number of tickets, Susie writes a formula for each of the printers. Here is her formula for *Sure Print*:

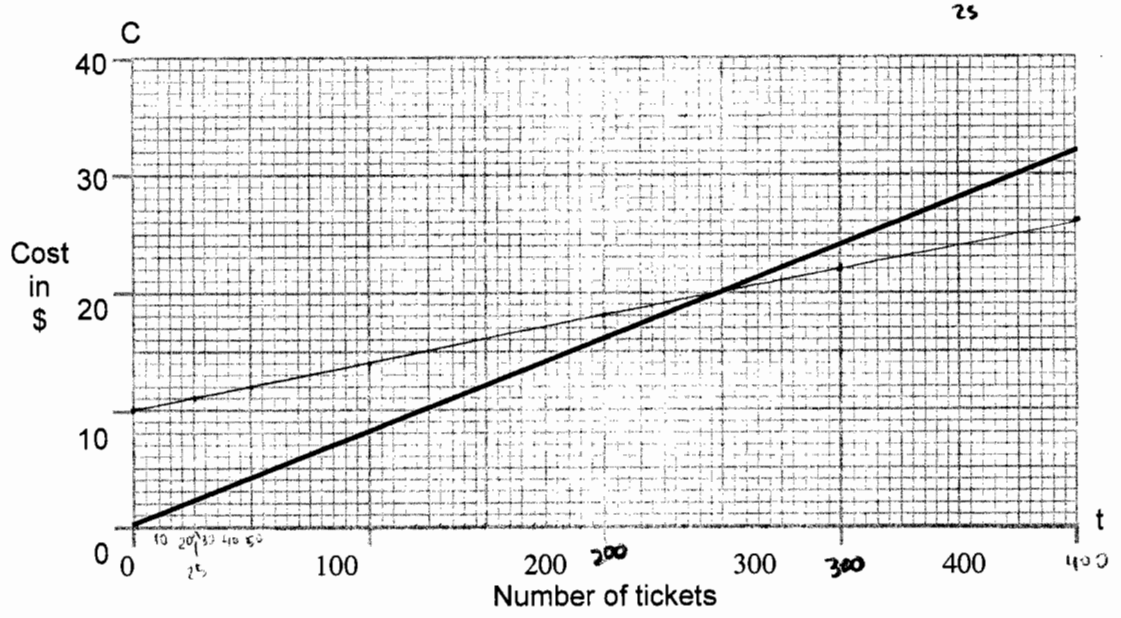
   Sure Print $C = \frac{2t}{25}$ $\frac{50}{25} = 2$ $\frac{100}{25} = 4$

   Write the formula for Best Print:

   Best Print $C = 10 + \frac{t}{25}$

2. Susie's brother Rob has drawn *Sure Print*'s graph on a grid. Draw the graph for *Best Print*.

$\frac{100}{25} + 10 = 14$ $\frac{300}{25} + 10 = 22$ $\frac{200}{25} + 10 = 18$ $\frac{400}{25} + 10 = 26$



3. Susie uses algebra to find the values of C and t when the cost of printing the tickets is the same for both of the printers.

C = $20 t = 250

Show how Susie may have calculated C and t.

Algebra:

$$\frac{2t}{25} = 10 + \frac{t}{25}$$

$$2t = 250 + t$$

$$t = 250$$

Check:

$$\frac{2(250)}{25} = 20$$

$$10 + \frac{(250)}{25} = 20$$

4. What do Rob's graphs and Susie's calculations tell us about the cost of the tickets? Which company should Susie choose under what circumstances?

The graphs and the calculations tell us that the cost of the tickets is cheaper with "Sure Print" when you buy only a few (less than 250 tickets.) The graphs and calculations also tell us that the cost of the tickets is cheaper with "Best Print" when you buy a lot of tickets (more than 250 tickets). To get a cheaper price, Susie should choose "Sure Print" if she only needs to print less than 250 tickets. On the other hand, Susie should chose "Best Print" if she needs to print more than 250 tickets. Although, if Susie needs to print exactly 250 tickets, she could choose any company.

Printing Tickets

T4

Susie is organizing the printing of tickets for a show.

She has collected prices from several printers and these two seem to be the best.

SURE PRINT
Ticket printing
25 tickets for $2

BEST PRINT
Tickets printed
$10 setting up
plus
$1 for 25 tickets

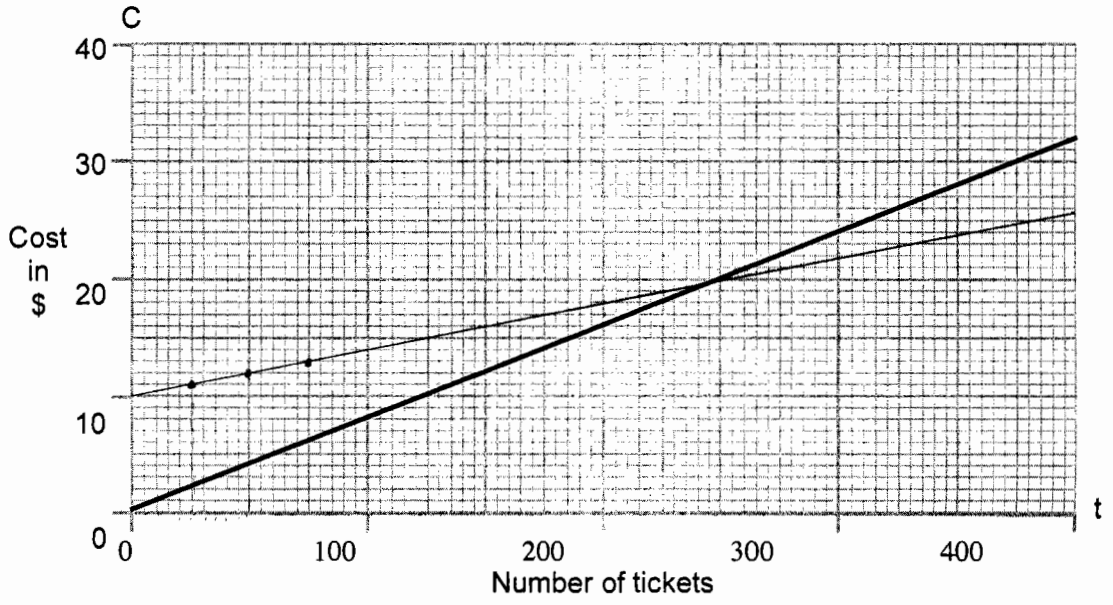
1. Using **C** for the cost of the printing and **t** for the number of tickets, Susie writes a formula for each of the printers. Here is her formula for *Sure Print*:

   Sure Print $C = \frac{2t}{25}$

   Write the formula for Best Print:

   Best Print $C = \frac{t}{25} + 10$

2. Susie's brother Rob has drawn *Sure Print*'s graph on a grid.
   Draw the graph for *Best Print*.



T4

3. Susie uses algebra to find the values of C and t when the cost of printing the tickets is the same for both of the printers.

C = 20 t = 250

Show how Susie may have calculated C and t.

If you graph the "Sure print" and "Best Print" → the intersection point of the 2 lines is the answer

4. What do Rob's graphs and Susie's calculations tell us about the cost of the tickets? Which company should Susie choose under what circumstances?

That Best print cost more at first but less if you order more than 250 tickets.

If Susie wants less than 250 tickets, she should choose "Sure print"

If more than 250 tickets, chose "Best print".

If she wants exactly 250 tickets, both costs are the same

Printing Tickets

T5

Susie is organizing the printing of tickets for a show.

She has collected prices from several printers and these two seem to be the best.

SURE PRINT
Ticket printing
25 tickets for $2

BEST PRINT
Tickets printed
$10 setting up
plus
$1 for 25 tickets

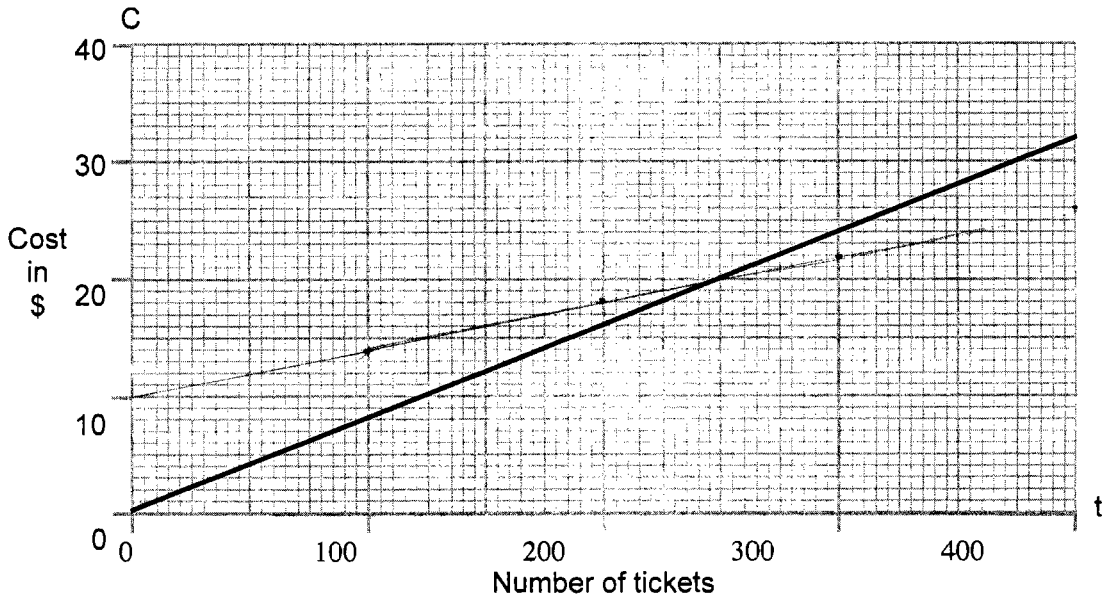
1. Using **C** for the cost of the printing and **t** for the number of tickets, Susie writes a formula for each of the printers. Here is her formula for *Sure Print*:

   Sure Print $C = \frac{2t}{25}$

   Write the formula for Best Print:

   Best Print $C = 10 + \frac{t}{25}$

2. Susie's brother Rob has drawn *Sure Print*'s graph on a grid.
   Draw the graph for *Best Print*.



3. Susie uses algebra to find the values of C and t when the cost of printing the tickets is the same for both of the printers.

C = $20 t = 250

Show how Susie may have calculated C and t.

$\frac{2t}{25} = 10 + \frac{t}{25}$

$25 \cdot \frac{t}{25} = 10 \cdot 25$

$t = 250$

$\frac{2(250)}{25} = C$

$\frac{500}{25} = C$

$20 = C$

$10 + \frac{(250)}{25} = C$

$10 + 10 = C$

$20 = C$

4. What do Rob's graphs and Susie's calculations tell us about the cost of the tickets? Which company should Susie choose under what circumstances?

Susie should choose Sure Print if she has less than 250 tickets to print but if she has more, she should choose Best Print.