

# What Is The Scientific Name for The Study of Shopping?

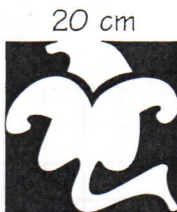
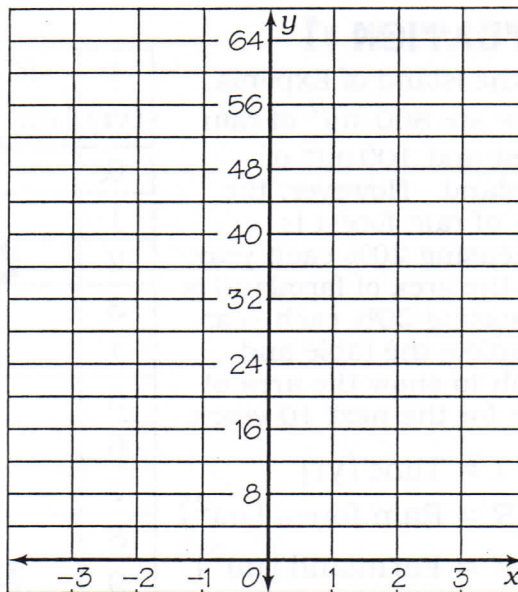
**S** Cross out the letter next to each correct answer (some answers are rounded). When you finish, the answer to the title question will remain. **S**

THABATUPNEYETOUR SOLDOWNSTAGOEBSY

1-12
2
10
64
16
13.1 cm
12.0 cm
4
18 cm
1
11.8 cm
8
72
16.2 cm
15.4 cm
14.6 cm
32
13-24
\$530.60
\$96,000
\$572.94
\$574.34
\$541.22
\$72,000
\$585.83
\$510.00
6.25 g
\$538.72
\$12,000
\$563.08
7.5 g
50 g
\$520.20
\$552.04

**PART 1.** Graph  $y = 8 \cdot 2^x$  for the domain  $[-3, -2, -1, 0, 1, 2, 3]$ . First, complete the table, then graph the function.

$x$	$y$	
-3		1
-2		2
-1		3
0		4
1		5
2		6
3		7



**PART 2.** Suppose you photocopy the square image at the left, reducing it to 90% of its original size. Then, suppose you make a copy of the copy, reducing the image to 90% of the first copy size. And suppose you continue this process through five reductions. Complete the table to show the width of the image after each reduction.

Copy No.	Width (cm)	
0	20	
1		8
2		9
3		10
4		11
5		12

$Q$	Value (\$)	
0	500.00	
1		13
2		14
3		15
4		16
5		17
6		18
7		19
8		20

**PART 3.** Teva deposited \$500 in a bank account that pays 8% interest, compounded quarterly. Complete the table at the left to show the value of her investment at the end of each quarter for the next two years. ( $Q$  = quarter number)

**PART 4.** Suppose an investment of \$3000 doubles in value every 12 years.

- 21 What will be its value after 24 years?
- 22 What will be its value after 60 years?

**PART 5.** Cesium-137 has a half life of 30 years. Suppose a lab stored a 100 g sample in 1970.

- 23 How many grams remained in the year 2000?
- 24 How many grams will remain in 2090?