



Excel Problem Solvers

1.

Listen to Tim and Susan's problem.

- Pay attention to the details.

2.

Build a spreadsheet with proper formulas.

3.

Answer the question with a graph.

1. School Shopping



I'm Susan. Would you help me pick one of these three stores to buy my school supplies? Here is my shopping list.

Susan's Shopping List

3 Ball Point Pens
1 TI-35 Calculator
7 100 page notebooks
1 bottle of 8 oz Glue
2 rolls of clear tape
2 Erasers
10 No. 2 Pencils
4 2 inch binders

1 USB Stick 5gb
1 box of 8 Color Markers
1 Stapler
1 Planner Book
1 Protractor
1 Compass
1 Bottle Liquid Paper

Walt-Mart

Ball Point Pen.....\$0.50
TI-35 Calculator.....\$28.00
100 page notebook...\$1.80
8 oz Glue\$1.20
Clear tape.....\$2.40
Eraser\$0.90
10 No. 2 Pencils\$.99
2 inch binder\$1.25
USB Stick 5gb\$9.50
8 Color Markers\$4.55
Stapler.....\$4.20
Planner Book.....\$3.90
Protractor\$1.00
Compass.....\$1.75
Liquid Paper.....\$2.00

Dollar Trap

Ball Point Pen\$0.40
TI-35 Calculator.....\$33.00
100 page notebook...\$1.00
8 oz Glue\$.80
Clear tape.....\$1.40
Eraser\$0.20
10 No. 2 Pencils.....\$.59
2 inch binder\$3.25
USB Stick 5gb\$14.00
8 Color Markers\$2.55
Stapler\$2.20
Planner Book.....\$5.00
Protractor.....\$2.00
Compass.....\$2.00
Liquid Paper\$1.00

Office Repo

Ball Point Pen\$1.40
TI-35 Calculator\$31.00
100 page notebook ..\$2.00
8 oz Glue.....\$1.50
Clear tape\$2.40
Eraser.....\$0.80
10 No. 2 Pencils\$2.59
2 inch binder.....\$2.15
USB Stick 5gb\$13.00
8 Color Markers.....\$6.00
Stapler\$3.00
Planner Book\$8.00
Protractor\$1.00
Compass\$1.00
Liquid Paper.....\$3.00

Some hints:

1. Read every detail in both people's comments and their shopping list.
2. Use a spreadsheet to calculate the total cost of the shopping list for using each person.
3. Make a bar chart showing the three company's total price for Susan and another chart for Tim.

I'm Tim. Would you help me pick one of these three stores to buy my school supplies? Here is my shopping list.

Tim's Shopping List

5 Ball Point Pens
1 TI-35 Calculator
4 100 page notebooks
2 bottles of 8 oz Glue
2 rolls of clear tape
2 Erasers
10 No. 2 Pencils
1 2 inch binders

1 USB Stick 5gb
1 box of 8 Color Markers
2 Bottle Liquid Paper



2. Cat or Dog?



I'm Susan. Would you help me choose a pet? I love both cats and dogs equally but I would like to spend as little money as possible each year. Compare these expenses in a spreadsheet and show me your answer. Create a graph.

Humane Society Pets Adoptions!

All dogs \$50

All cats \$90

The small print:

All pet adoptions include vaccinations, spaying and neutering.

Cat Accessory list

Collar\$2.00

Small ID tag\$4.50

Food and water bowl ...\$7.00

The small print:

Buy one of each of these for my pet.

Dog Accessory list

Collar (large)\$2.50

Large ID tag\$5.50

Food and water bowl....\$7.00

Leash\$3.00

The small print:

Buy one of each of these for my pet.

Cat Supplies list

Box of cat food \$11.00

Kitty Litter \$8.00

The small print: Buy two of each of these for my pet each month.

Dog Supplies list

Bag of dog food \$21.00

Dog treats \$3.00

The small print: Buy two of each of these for my pet each month.

Some hints:

1. Read every detail in both people's comments and the small print of each box.
2. Use a spreadsheet to calculate the total cost of ownership for owning each pet for one year (12 months).
3. Make a bar chart showing the first year's total price for a dog and a cat.

3. Three vacations



I'm Susan. Would you help me pick one of these three vacations? My husband and I like all three vacation ideas, but we want to spend as little as possible. We will fly, stay five nights and four days. Tell me which of these will cost the least?

Caribbean Cruise

\$555 per person

The small print:

All inclusive meals and entertainment. Leaves from Miami. Air fare not included.



Orlando Theme Parks

Theme Park Tickets:

Disneyland \$99

Universal Studios \$95

Sea World \$85

Busch Gardens \$85

The small print:

No car rental. Hotel \$105 / night. Food estimate \$50 per person per day.



Chicago Museum Tour

Museum Tickets:

Natural History \$18 ea

Chicago Museum of Art \$25

Science Museum \$15

Museum of Broadcast History \$9

The small print:

Car rental \$40 / day. Hotel \$120 / night. Food estimate \$50 per person per day.



Air Fare Rates

Miami \$350

SALE! Orlando \$100

Chicago \$280

Each ticket is a round trip fare.

Some hints:

1. Read every detail in both people's comments and the small print of each ad.
2. Each printer has an initial cost plus a cost per page.
3. Use a spreadsheet to calculate the total cost of ownership for using each printer for Susan and another cost for Tim.
4. Make a bar chart showing the three company's total price for Susan and another chart for Tim.

I'm Tim. Would you help me pick one of these three vacations? My wife and two children and I like all three vacation ideas, but we want to spend as little as possible. We will fly, stay five nights and four days. Tell me which of these will cost the least?



4. Clear up the printer confusion!



I'm Susan. Would you help me pick one of these three printers? I plan to print about 15 pages each day (five days per week) for the next year. I want the total cost to be as low as possible. I expect the printer to last two years.

Epsilon

Ink Jet Technology

Only \$29

The small print:

Each set of cartridges will print about 200 color pages.



Heavy Package

Portable Laser Technology

Only \$149

The small print:

Each set of cartridges will print about 1000 color pages.



Zero

Workgroup Laser Printer

Only \$549

The small print:

Each set of cartridges will print about 11,000 color pages.



Supplies

Epsilon Ink Set \$40



HP Toner Set \$90



**Zero Toner Set
\$370**



Some hints:

1. Read every detail in both people's comments and the small print of each ad.
2. Each printer has an initial cost plus a cost per page.
3. Use a spreadsheet to calculate the total cost of ownership for using each printer for Susan and another cost for Tim.
4. Make a bar chart showing the three company's total price for Susan and another chart for Tim.

I'm Tim. Would you help me pick one of these three printers? I plan to print about 500 pages each day (five days per week) for the next year. I want the total cost to be as low as possible. I expect the printer to last two years.



5. Untangle the Cell Phone Bill!



I'm Susan. Would you help me pick one of these three companies? I'm looking to get the best price possible during the next 2 years. I'm OK with signing a contract. I plan to use 3 GB of data each month.

X-Mobile
The best value on the market!

\$19 per month

Unlimited voice and Text
1 GB of DATA

The small print:
Taxes and fees \$9.50 / month. Each GB of extra data is \$20. Cell phone rental \$30.00 / month. Contract is for 24 months minimum.

Veritium
The best value on the market!

\$35 per month

Unlimited voice and Text
1 GB of DATA

The small print:
Each GB of extra data is \$15. Initial phone purchase is \$500. No contract!

ABC
The best value on the market!

\$55 per month

Unlimited voice and Text
1 GB of DATA

The small print:
Each GB of extra data is \$5. Free phone! 24 month contract.

Some hints:

1. Read every detail in both people's comments and the small print of each ad.
2. One company has a large initial cost. All three have recurring monthly costs.
3. Add the monthly costs for each company. Multiply that cost by 24 to get the total recurring costs.
4. Add the initial costs to the 24 months of recurring costs. You should see which company is the least expensive.
5. Make a bar chart showing the three company's total price for Susan and make another chart with all three companies for Tim.

I'm Tim. Would you help me pick one of these three companies? I'm looking to get the best price possible during the next 2 years. I'm OK with signing a contract. I plan to use 1 GB of data each month.



6. Choose from Three Cars



I'm Susan. Would you help me pick one of these three cars? I want to spend as little as possible. I want to drive the car until it has 250,000 miles when I assume it will be nearly worthless. I drive about 30,000 miles every year. Thankfully, I have enough money saved so that I don't have to borrow money and pay interest on a loan or that would cost me an extra 40%!

Chevy Spark

Compact Car

\$14,500

The small print:

90 HP Engine. 35 MPG. \$1500 / year insurance.
Sales Tax \$1,450. License \$210 / year.



Ford Mustang

Muscle Car Style and Speed!

\$31,000

The small print:

390 HP Engine. 19 MPG. \$2500 / year insurance. Sales Tax \$3,100. License \$300 / year.



Cadillac Escalade

SUV

\$72,000

The small print:

420 HP Engine. 17 MPG. \$3100 / year insurance. Sales Tax \$7,200. License \$450 / year.



I'm Tim. Would you help me pick one of these three cars? I want to spend as little as possible. I want to drive the car until it has 250,000 miles when I assume it will be nearly worthless. I drive about 30,000 miles every year. I need to borrow money, so estimate an extra 40% to the price of each car.

Some hints:

1. Read every detail in both people's comments and the small print of each ad. Use regular gasoline for all your gasoline calculations.
2. Be sure to calculate the initial costs and recurring costs separately.
3. Use a spreadsheet to calculate the total cost of ownership for the lifetime of each car for Susan and another set of costs for each car for Tim.
4. Make a bar chart showing the three car's total price for Susan and another chart for Tim.

