# ON YOUR OWN

You've been waiting your whole life to finally be out on your own. You just rented a new apartment that you now must furnish. Fortunately, many of your relatives have given you much of what you will need. Unfortunately, you still don't have a TV, a refrigerator, a laptop computer, or a car.

You're the type that always wants the best of everything, but now that you're on your own, can you afford the best? Based on the information in the given ads, choose the biggest/best item in each of the categories that you can afford.

**Flat Screen TVs**

You figured that you can afford a $75 a month payment for a TV.

$529

32 inch LCD

$100 down payment
Pay in full within 6 months to receive no interest

$949.88

40 inch LCD

$50 down payment
Pay in full within 12 months to receive no interest

$1138.80

46 inch LCD

$150 down payment
Pay in full within 12 months to receive no interest

GOOD NEWS! Your grandmother just told you that she'll pay the down payment for your TV! So which TV is the biggest one that you can afford without having to pay any interest?

Hint:  Set up 3 separate two-step equations using the following format

*# of monthy payments · monthly payment (m) + grandma's down payment = total price*

We'll set up the first one for you.  You just have to solve it to figure out how much the monthly payment will be.  Remember **m = monthly payment amount**.

**32 inch LCD**

$$6m + 100 = 529$$

Monthly payment is $ _____

Now set up the other two equations and solve them.

**40 inch LCD**

Monthly payment is $ _____

**46 inch LCD**

Monthly payment is $ _____

So which TV is the biggest one that you can afford to pay each month without having to pay any interest? _____

## Refrigerators

You figured that you can afford a $100 a month payment for a refrigerator.

**Basic**

$625

**Standard**

$964

**Deluxe**

$1940

$50 down payment
Pay in full within 6 months to receive no interest

$50 down payment
Pay in full within 8 months to receive no interest

$50 down payment
Pay in full within 18 months to receive no interest

**What is the best refrigerator that you can afford without having to pay any interest?**

Set up and solve three separate two-step equations.

| Basic | Standard | Deluxe |
|---|---|---|

$6m + 50 = 625$

Monthly payment is
$ _____

Monthly payment is
$ _____

Monthly payment is
$ _____

So which refrigerator is the best one that you can afford to pay each month without having to pay any interest? _____

## Laptop Computers

You figured that you can afford a $65 a month payment for a laptop.

### Basic

$369

$0 down payment
Pay in full within 6 months to receive no interest

### Standard

$1229

$100 down payment
Pay in full within 12 months to receive no interest

### Deluxe

$1845

$200 down payment
Pay in full within 24 months to receive no interest

## GOOD NEWS! YOUR MOM SAID THAT SHE'D PAY ANY DOWN PAYMENT THAT YOUR LAPTOP MAY HAVE.

**What is the best laptop that you can afford without having to pay any interest?**

Use $m$ for monthly payment $.

Set up and solve three separate two-step equations.

### Basic

Monthly payment is
$ _____

### Standard

Monthly payment is
$ _____

### Deluxe

Monthly payment is
$ _____

So which laptop is the best one that you can afford to pay each month without having to pay any interest? _____

# CAR SHOPPING!!!

It's time to get a new car!  Well, actually a new, used car since that's probably all you'll be able to afford with rent, utilities, food, clothing and all the new payments for your TV, refrigerator and laptop.  For your first job, you bring home $1,450 a month.  You figured that you will be able to pay 15% of that every month towards a car payment.

Good News!!  Your rich Uncle Charlie said that if you put a $200 down payment on the car, he'll pay for the rest of it so you avoid interest charges.  Here's the catch.  You must pay back the remaining balance of the car within 3 years and make the same payment each month during those 3 years.

Figure out which of the cars listed below you can afford using the information given by your rich Uncle Charlie.  Remember, you can only afford to pay 15% of your monthly income towards a monthly car payment.  What car will you pick?

Write and solve a two step equation for each of the four cars below to show what the monthly payment you would have to give to Uncle Charlie.  *Hint:  Think about how many months are in 3 years.  Don't forget the $200 down payment.*



**2003 Chevy Malibu   $4,200**



**2001 Pontiac Firebird Trans-Am  $7,850**



**2007 Volkswagen Passat $9,500**



**2004 Silver Infinity $13,985**

What is the maximum monthly car payment you can afford if you are able to put 15% of your $1,450 per month income towards it? _____



**2003 Chevy Malibu**
**$4,200**



**2001 Pontiac Firebird**
**Trans-Am  $7,850**

Monthly payment is  $ _____

Monthly payment is  $ _____



**2007 Volkswagen Passat**
**$9,500**

**Use _m_ for monthly payment $.**



**2004 Silver Infinity**
**$13,985**

Monthly payment is  $ _____

Monthly payment is  $ _____

Of the cars that you can afford, which one will you pick?

_____

# KEY

Hint: Set up 3 separate two-step equations using the following format

*# of monthy payments · monthly payment (m) + grandma's down payment = total price*

We'll set up the first one for you. You just have to solve it to figure out how much the monthly payment will be. Remember **m = monthly payment amount**.

**32 inch LCD**

$$6m + 100 = 529$$
$$-100 \quad -100$$
$$\frac{6m}{6} = \frac{429}{6}$$
$$m = 71.5$$

Monthly payment is $ __71.50__

Now set up the other two equations and solve them.

**40 inch LCD**

$$12m + 50 = 949.88$$
$$-50 \quad -50.00$$
$$\frac{12m}{12} = \frac{899.88}{12}$$
$$m = 74.99$$

Monthly payment is $ __74.99__

**46 inch LCD**

$$12m + 150 = 1138.80$$
$$-150 \quad -150.00$$
$$\frac{12m}{12} = \frac{988.80}{12}$$
$$m =$$

Monthly payment is $ __82.40__

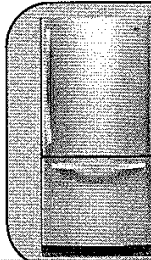So which TV is the biggest one that you can afford to pay each month without having to pay any interest? __40 inch LCD__

# KEY

**Refrigerators**

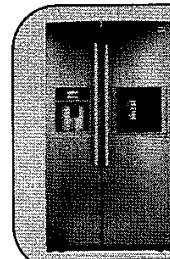You figured that you can afford a $100 a month payment for a refrigerator.

**Deluxe**
$1940

**Standard**
$964

**Basic**
$625

$50 down payment
Pay in full within 18 months to receive no interest

$50 down payment
Pay in full within 8 months to receive no interest

$50 down payment
Pay in full within 6 months to receive no interest

**What is the best refrigerator that you can afford without having to pay any interest?**

Set up and solve three separate two-step equations.

**Basic**

$$6m + 50 = 625$$
$$-50 \quad -50$$
$$\frac{6m}{6} = \frac{575}{6}$$
$$m = 95.8\overline{3}$$

Monthly payment is
$ __95.83__

**Standard**

$$8m + 50 = 964$$
$$-50 \quad -50$$
$$\frac{8m}{8} = \frac{914}{8}$$
$$m = 114.2\overline{5}$$

Monthly payment is
$ __114.25__

**Deluxe**

$$18m + 50 = 1940$$
$$-50 \quad -50$$
$$\frac{18m}{18} = \frac{1890}{18}$$
$$m = 105$$

Monthly payment is
$ __105__

So which refrigerator is the best one that you can afford to pay each month without having to pay any interest?  __BASIC__

# KEY

## Laptop Computers

You figured that you can afford a $65 a month payment for a laptop.

### Basic
$369

$0 down payment
Pay in full within 6 months to receive no interest

### Standard
$1229

$100 down payment
Pay in full within 12 months to receive no interest

### Deluxe
$1845

$200 down payment
Pay in full within 24 months to receive no interest

## GOOD NEWS! YOUR MOM SAID THAT SHED PAY ANY DOWN PAYMENT THAT YOUR LAPTOP MAY HAVE.

### What is the best laptop that you can afford without having to pay any interest?

$m = $ monthly payment

Set up and solve three separate two-step equations.

### Basic

$$\frac{6m}{6} = \frac{369}{6}$$

$$m = 61.5$$

Monthly payment is
$ __61.50__

### Standard

$$12m + 100 = 1229$$
$$-100 \quad -100$$
$$\frac{12m}{12} = \frac{1129}{12}$$
$$m \approx 94.08$$

Monthly payment is
$ __94.08__

### Deluxe

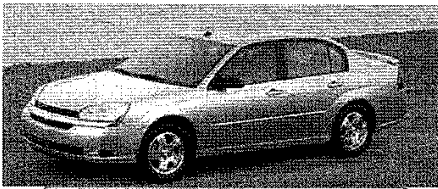$$24m + 200 = 1845$$
$$-200 \quad -200$$
$$24m = 1645$$
$$m \approx 68.54$$

Monthly payment is
$ __68.54__

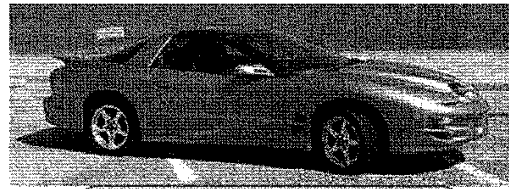So which laptop is the best one that you can afford to pay each month without having to pay any interest?  __BASIC__

**2003 Chevy Malibu $4,200**

$$36m + 200 = 4{,}200$$
$$-200 \quad -200$$
$$\frac{36m}{36} = \frac{4000}{36}$$
$$m = 111.11$$

Monthly payment is $ __111.11__

**2001 Pontiac Firebird Trans-Am $7,850**

$$36m + 200 = 7850$$
$$-200 \quad -200$$
$$\frac{36m}{36} = \frac{7650}{36}$$
$$m = 212.5$$

Monthly payment is $ __212.50__

15% of 1450 is $217.50 (max. amt.)

Use **m** for monthly payment $.

**2007 Volkswagen Passat $9,500**

$$36m + 200 = 9500$$
$$-200 \quad -200$$
$$\frac{36m}{36} = \frac{9300}{36}$$
$$m = 258.3$$

Monthly payment is $ __258.33__
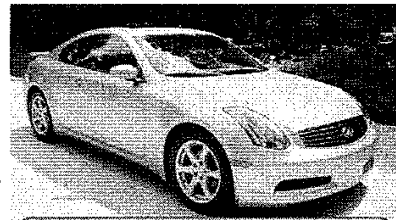
**2004 Silver Infinity $13,985**

$$36m + 200 = 13985$$
$$-200 \quad -200$$
$$\frac{36m}{36} = \frac{13785}{36}$$
$$m \approx 382.92$$

Monthly payment is $ __382.92__

Of the cars that you can afford, which one will you pick?

__Answers will vary.__
(Either Malibu or Firebird)