

Start-Up Costs

Is each cost paid once, or for every batch? Then find the totals.

Two kinds of costs





Start-up costs are paid once, before you open.
You keep these things, like a table or a cash box.

Supply costs are paid again for every batch.
A batch (a set made at one time) uses them up.

Bead Buddies' shopping list. Circle start-up or supply.

What they buy	Price	Start-up or supply?
Example  Folding table	\$18.00	<u>start-up</u> supply
1.  Beads	\$6.40	start-up supply
2.  String	\$2.30	start-up supply
3.  Sign board	\$7.50	start-up supply
4.  Charms	\$1.90	start-up supply
5.  Cash box	\$12.75	start-up supply
6.  Scissors	\$4.20	start-up supply
7.  Gift bags	\$1.40	start-up supply

8. Start-up costs: _____

9. Supplies for one batch of 24: _____

10. Spent before the first sale (start-up costs and one batch): _____

The Cookie Corner's start-up costs were \$15.60. Fill in each batch.

Batch of cookies	Start-up costs	Supply costs	Cost of this batch	Spent so far
Example Batch 1	\$15.60	\$7.20	\$22.80	\$22.80
Batch 2	_____	\$7.20	_____	_____
Batch 3	_____	\$7.20	_____	_____

11. How much more did batch 1 cost than batch 2? _____

Setting a Price

Find what one item costs to make. Then choose a good price.

Remember

Cost of one item = cost of one batch ÷ items in the batch

Profit on one item = price – cost of one item



Find the missing number for each batch.

What they make	Cost of one batch	Items in one batch	Cost of one item
Example  Bracelets	\$12.00	24	\$0.50
1.  Cookies	\$7.20	24	_____
2.  Birdhouses	_____	6	\$4.35
3.  Cups of lemonade	\$4.80	_____	\$0.15
4.  Bookmarks	\$5.40	12	_____

One bracelet costs \$0.50 to make. Find the profit at each price.

Price	Profit on one bracelet	Buyers in a survey	Profit from all buyers
Example \$0.75	\$0.25	40	\$10.00
\$1.50	_____	28	_____
\$2.00	_____	22	_____
\$3.50	_____	6	_____

5. Which price makes the most profit? _____

Is the price too high or too low? Circle one.

Example  At \$3.50, only 6 classmates would buy one. too high too low
6.  At \$0.75, they keep only \$0.25 on each one. too high too low
7.  At \$0.40, they lose \$0.10 on every bracelet. too high too low
8.  At \$5.00, few buy. A store sells them for \$2.00. too high too low

Sales Records

Keep a record of each day's sales. Then make a bar graph.

Remember

A **sales record** shows what was sold each day.

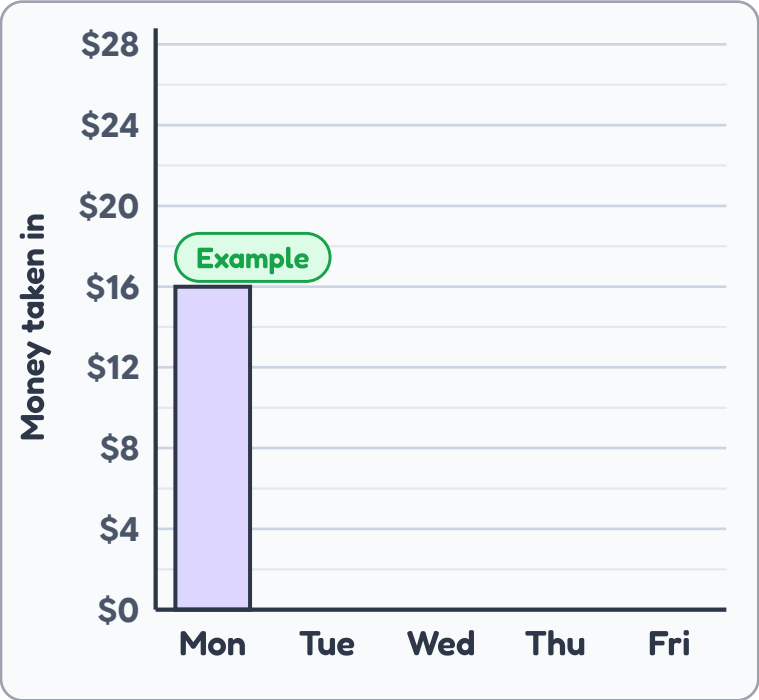
Money taken in = number sold × price



Bead Buddies sold bracelets for \$2.00 each at the fair. Fill in the record.

Day	Tally marks	Bracelets sold	Money taken in
Example Monday		<u>8</u>	<u>\$16.00</u>
Tuesday		<u> </u>	<u> </u>
Wednesday		<u> </u>	<u> </u>
Thursday		<u> </u>	<u> </u>
Friday		<u> </u>	<u> </u>
Total for the week		<u> </u>	<u> </u>

Draw a bar for each day. Then answer the questions.



1. Best day: _____

2. Worst day: _____

3. How much more money came in on the best day than on the worst day?

4. How many bracelets must they sell to take in **\$30.00** on Saturday?
_____ bracelets

Profit or Loss

Compare the money taken in with the costs: a profit or a loss?

Remember

When money taken in is more than costs, the difference is a **profit**.
When costs are more than money taken in, the difference is a **loss**.



Bead Buddies' income statement. Find each profit or loss.

Week	Money taken in	Costs	Profit or loss?	Amount
Example Week 1	\$88.00	\$66.45	profit loss	\$21.55
Week 2	\$90.00	\$24.00	profit loss	
Week 3	\$18.00	\$24.00	profit loss	
Week 4	\$70.00	\$12.00	profit loss	
Total			profit loss	

1. Week 3 bought the same supplies as week 2. Why did it lose money? Circle one.

It sold fewer bracelets. Its supplies cost more.
2. Without the \$42.45 start-up costs, week 1's profit would be _____

Find the profit or loss. Circle which one, and write the amount.

3. The Cookie Corner sells 45 cookies for \$0.75 each. It used 2 batches of supplies that cost \$7.20 each.

Work

 profit loss _____

4. Theo washes 8 cars for \$5.00 each. He buys a hose for \$26.50, buckets for \$12.00 and soap for \$4.00.

Work

 profit loss _____

Breaking Even

How many must you sell to pay back the start-up costs?

Remember

A business **breaks even** when profit pays back its start-up costs.



Each bracelet sells for \$2.00 and costs \$0.50 to make. Fill in the table.

Example

Bracelets sold	5	10	15	20	25	30	35
Profit so far	\$7.50						
Paid back \$42.45?	no						

1. It is between 25 and 30 bracelets. Exactly how many pay it back? _____

What if something changes? Find the new number to break even.

What changes	Profit on one bracelet	Bracelets to break even	Sooner or later than before?
Example The price goes up to \$2.50.	\$2.00	22	sooner
2. Beads go on sale. A bracelet now costs \$0.35 to make.			
3. They buy a bigger sign. It adds \$7.50 to the start-up costs.			

How many must they sell to pay it back? Show your work.

4. Theo's hose and buckets cost \$38.50. He charges \$5.00 a car, and soap costs \$0.50 a car.

Work

Answer _____ cars

5. Nia buys a thermos for \$18.00. She sells cocoa for \$0.75 a cup, and a cup costs \$0.30 to make.

Work

Answer _____ cups

Start-Up Costs

Is each cost paid once, or for every batch? Then find the totals.

Two kinds of costs





Start-up costs are paid once, before you open.
You keep these things, like a table or a cash box.

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A batch (a set made at one time) uses them up.

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5.  Cash box	\$12.75	start-up supply
6.  Scissors	\$4.20	start-up supply
7.  Gift bags	\$1.40	start-up supply

8. Start-up costs: _____

9. Supplies for one batch of 24: _____

10. Spent before the first sale (start-up costs and one batch): _____

The Cookie Corner's start-up costs were \$15.60. Fill in each batch.

Batch of cookies	Start-up costs	Supply costs	Cost of this batch	Spent so far
Example Batch 1	\$15.60	\$7.20	\$22.80	\$22.80
Batch 2	_____	\$7.20	_____	_____
Batch 3	_____	\$7.20	_____	_____

11. How much more did batch 1 cost than batch 2? _____

Setting a Price

Find what one item costs to make. Then choose a good price.

Remember

Cost of one item = cost of one batch ÷ items in the batch

Profit on one item = price – cost of one item



Find the missing number for each batch.

What they make	Cost of one batch	Items in one batch	Cost of one item
Example Bracelets	\$12.00	24	\$0.50
1. Cookies	\$7.20	24	
2. Birdhouses		6	\$4.35
3. Cups of lemonade	\$4.80		\$0.15
4. Bookmarks	\$5.40	12	

One bracelet costs \$0.50 to make. Find the profit at each price.

Price	Profit on one bracelet	Buyers in a survey	Profit from all buyers
Example \$0.75	\$0.25	40	\$10.00
\$1.50		28	
\$2.00		22	
\$3.50		6	

5. Which price makes the most profit? _____

Is the price too high or too low? Circle one.

Example	At \$3.50, only 6 classmates would buy one.	too high	too low
6.	At \$0.75, they keep only \$0.25 on each one.	too high	too low
7.	At \$0.40, they lose \$0.10 on every bracelet.	too high	too low
8.	At \$5.00, few buy. A store sells them for \$2.00.	too high	too low

Sales Records

Keep a record of each day's sales. Then make a bar graph.

Remember

A **sales record** shows what was sold each day.

Money taken in = number sold $\times$ price



Bead Buddies sold bracelets for \$2.00 each at the fair. Fill in the record.

Day	Tally marks	Bracelets sold	Money taken in
Example Monday		8	\$16.00
Tuesday			
Wednesday			
Thursday			
Friday			
Total for the week			

Draw a bar for each day. Then answer the questions.



1. Best day: _____
2. Worst day: _____
3. How much more money came in on the best day than on the worst day?

4. How many bracelets must they sell to take in **\$30.00** on Saturday?
_____ bracelets

Profit or Loss

Compare the money taken in with the costs: a profit or a loss?

Remember

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Bead Buddies' income statement. Find each profit or loss.

Week	Money taken in	Costs	Profit or loss?	Amount
Example Week 1	\$88.00	\$66.45	profit loss	\$21.55
Week 2	\$90.00	\$24.00	profit loss	_____
Week 3	\$18.00	\$24.00	profit loss	_____
Week 4	\$70.00	\$12.00	profit loss	_____
Total	_____	_____	profit loss	_____

1. Week 3 bought the same supplies as week 2. Why did it lose money? Circle one.

It sold fewer bracelets. Its supplies cost more.
2. Without the \$42.45 start-up costs, week 1's profit would be _____

Find the profit or loss. Circle which one, and write the amount.

3. The Cookie Corner sells 45 cookies for \$0.75 each. It used 2 batches of supplies that cost \$7.20 each.

Work

 profit loss _____

4. Theo washes 8 cars for \$5.00 each. He buys a hose for \$26.50, buckets for \$12.00 and soap for \$4.00.

Work

 profit loss _____

Breaking Even

How many must you sell to pay back the start-up costs?

Remember

A business **breaks even** when profit pays back its start-up costs.



Each bracelet sells for \$2.00 and costs \$0.50 to make. Fill in the table.

Example

Bracelets sold	5	10	15	20	25	30	35
Profit so far	\$7.50						
Paid back \$42.45?	no						

1. It is between 25 and 30 bracelets. Exactly how many pay it back? _____

What if something changes? Find the new number to break even.

What changes	Profit on one bracelet	Bracelets to break even	Sooner or later than before?
Example The price goes up to \$2.50.	\$2.00	22	sooner
2. Beads go on sale. A bracelet now costs \$0.35 to make.			
3. They buy a bigger sign. It adds \$7.50 to the start-up costs.			

How many must they sell to pay it back? Show your work.

4. Theo's hose and buckets cost \$38.50. He charges \$5.00 a car, and soap costs \$0.50 a car.

Work

Answer _____ cars

5. Nia buys a thermos for \$18.00. She sells cocoa for \$0.75 a cup, and a cup costs \$0.30 to make.

Work

Answer _____ cups

Start-Up Costs

Is each cost paid once, or for every batch? Then find the totals.

Two kinds of costs



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What they buy	Price	Start-up or supply?
Example Folding table	\$18.00	<u>start-up</u> supply
1. Beads	\$6.40	start-up <u>supply</u>
2. String	\$2.30	start-up <u>supply</u>
3. Sign board	\$7.50	<u>start-up</u> supply
4. Charms	\$1.90	start-up <u>supply</u>
5. Cash box	\$12.75	<u>start-up</u> supply
6. Scissors	\$4.20	<u>start-up</u> supply
7. Gift bags	\$1.40	start-up <u>supply</u>

8. Start-up costs: \$42.45 9. Supplies for one batch of 24: \$12.00
 10. Spent before the first sale (start-up costs and one batch): \$54.45

The Cookie Corner's start-up costs were \$15.60. Fill in each batch.

Batch of cookies	Start-up costs	Supply costs	Cost of this batch	Spent so far
Example Batch 1	<u>\$15.60</u>	<u>\$7.20</u>	<u>\$22.80</u>	<u>\$22.80</u>
Batch 2	<u>\$0.00</u>	<u>\$7.20</u>	<u>\$7.20</u>	<u>\$30.00</u>
Batch 3	<u>\$0.00</u>	<u>\$7.20</u>	<u>\$7.20</u>	<u>\$37.20</u>

11. How much more did batch 1 cost than batch 2? \$15.60

Setting a Price

Find what one item costs to make. Then choose a good price.

Remember

Cost of one item = cost of one batch ÷ items in the batch

Profit on one item = price – cost of one item



Find the missing number for each batch.

What they make	Cost of one batch	Items in one batch	Cost of one item
Example Bracelets	\$12.00	24	\$0.50
1. Cookies	\$7.20	24	\$0.30
2. Birdhouses	\$26.10	6	\$4.35
3. Cups of lemonade	\$4.80	32	\$0.15
4. Bookmarks	\$5.40	12	\$0.45

One bracelet costs \$0.50 to make. Find the profit at each price.

Price	Profit on one bracelet	Buyers in a survey	Profit from all buyers
Example \$0.75	\$0.25	40	\$10.00
\$1.50	\$1.00	28	\$28.00
\$2.00	\$1.50	22	\$33.00
\$3.50	\$3.00	6	\$18.00

5. Which price makes the most profit? \$2.00

Is the price too high or too low? Circle one.

Example	At \$3.50, only 6 classmates would buy one.	<u>too high</u>	too low
6.	At \$0.75, they keep only \$0.25 on each one.	too high	<u>too low</u>
7.	At \$0.40, they lose \$0.10 on every bracelet.	too high	<u>too low</u>
8.	At \$5.00, few buy. A store sells them for \$2.00.	<u>too high</u>	too low

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Remember

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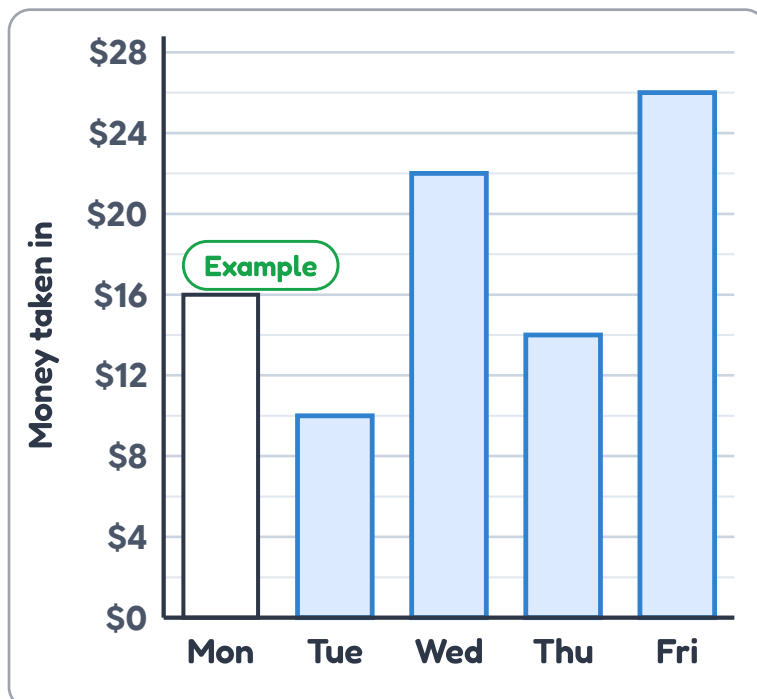
Money taken in = number sold $\times$ price



Bead Buddies sold bracelets for \$2.00 each at the fair. Fill in the record.

Day	Tally marks	Bracelets sold	Money taken in
Example Monday		<u>8</u>	<u>\$16.00</u>
Tuesday		<u>5</u>	<u>\$10.00</u>
Wednesday		<u>11</u>	<u>\$22.00</u>
Thursday		<u>7</u>	<u>\$14.00</u>
Friday		<u>13</u>	<u>\$26.00</u>
Total for the week		<u>44</u>	<u>\$88.00</u>

Draw a bar for each day. Then answer the questions.



- Best day: Friday
- Worst day: Tuesday
- How much more money came in on the best day than on the worst day?
\$16.00
- How many bracelets must they sell to take in **\$30.00** on Saturday?
15 bracelets

Profit or Loss

Compare the money taken in with the costs: a profit or a loss?

Remember

When money taken in is more than costs, the difference is a **profit**.

When costs are more than money taken in, the difference is a **loss**.



Bead Buddies' income statement. Find each profit or loss.

Week	Money taken in	Costs	Profit or loss?	Amount
Example Week 1	\$88.00	\$66.45	profit loss	<u>\$21.55</u>
Week 2	\$90.00	\$24.00	profit loss	<u>\$66.00</u>
Week 3	\$18.00	\$24.00	profit loss	<u>\$6.00</u>
Week 4	\$70.00	\$12.00	profit loss	<u>\$58.00</u>
Total	<u>\$266.00</u>	<u>\$126.45</u>	profit loss	<u>\$139.55</u>

1. Week 3 bought the same supplies as week 2. Why did it lose money? Circle one.

It sold fewer bracelets.

Its supplies cost more.

2. Without the \$42.45 start-up costs, week 1's profit would be \$64.00

Find the profit or loss. Circle which one, and write the amount.

3. The Cookie Corner sells 45 cookies for \$0.75 each. It used 2 batches of supplies that cost \$7.20 each.

Work

$$45 \times \$0.75 = \$33.75$$

$$2 \times \$7.20 = \$14.40$$

$$\$33.75 - \$14.40 = \$19.35$$



profit

loss

\$19.35

4. Theo washes 8 cars for \$5.00 each. He buys a hose for \$26.50, buckets for \$12.00 and soap for \$4.00.

Work

$$8 \times \$5.00 = \$40.00$$

$$\$26.50 + \$12.00 + \$4.00 = \$42.50$$

$$\$42.50 - \$40.00 = \$2.50$$



profit

loss

\$2.50

Breaking Even

How many must you sell to pay back the start-up costs?

Remember

A business **breaks even** when profit pays back its start-up costs.



Each bracelet sells for \$2.00 and costs \$0.50 to make. Fill in the table.

Example

Bracelets sold	5	10	15	20	25	30	35
Profit so far	\$7.50	\$15.00	\$22.50	\$30.00	\$37.50	\$45.00	\$52.50
Paid back \$42.45?	no	no	no	no	no	yes	yes

1. It is between **25** and **30** bracelets. Exactly how many pay it back? 29

What if something changes? Find the new number to break even.

What changes	Profit on one bracelet	Bracelets to break even	Sooner or later than before?
Example The price goes up to \$2.50 .	<u>\$2.00</u>	<u>22</u>	<u>sooner</u>
2. Beads go on sale. A bracelet now costs \$0.35 to make.	<u>\$1.65</u>	<u>26</u>	<u>sooner</u>
3. They buy a bigger sign. It adds \$7.50 to the start-up costs.	<u>\$1.50</u>	<u>34</u>	<u>later</u>

How many must they sell to pay it back? Show your work.

4. Theo's hose and buckets cost **\$38.50**. He charges **\$5.00** a car, and soap costs **\$0.50** a car.

Work

$$\begin{aligned} \$5.00 - \$0.50 &= \$4.50 \\ 8 \times \$4.50 &= \$36.00, \text{ too little} \\ 9 \times \$4.50 &= \$40.50, \text{ enough} \end{aligned}$$



Answer 9 cars

5. Nia buys a thermos for **\$18.00**. She sells cocoa for **\$0.75** a cup, and a cup costs **\$0.30** to make.

Work

$$\begin{aligned} \$0.75 - \$0.30 &= \$0.45 \\ \$18.00 \div \$0.45 &= 40 \end{aligned}$$



Answer 40 cups