25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale?
   $24.00

   Show your calculations.
   
   \[
   \begin{align*}
   \frac{32}{x} &= 0.25 \\
   32 - 8 &= (24)
   \end{align*}
   \]

   In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
   In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
   In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions
   because \(4 \times 25\% = 100\%\).

   Explain why Julie is wrong.

   Julie thinks that the 4 25%’s are being taken
   from the original price but the 2nd 25% is from
   the price of the item after the 1st 25% and
   the 3rd is taken from the price after the 2nd
   25% and so on...
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
24 & \quad \times \quad 0.25 \\
\hline
6 \\
\hline
24 - 6 &= 18 \\
18 &\quad \times \quad 0.25 = 13.5 \\
13.5 &\quad \times \quad 25 = 337.5 \\
10.12 &\quad 10.12
\end{align*}
\]

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[
\begin{align*}
10.12 & \quad \div \quad 3 = 3.375 \\
\hline
10.12 & \quad \div \quad 3 = 3.375
\end{align*}
\]

\[108\%\]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale?
   $ \underline{24} \\
   Show your calculations.
   
   \[ 32 \times 0.25 = 8 \]
   \[ 32 - 8 = 24 \]

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).

Explain why Julie is wrong.

\[ \text{Cause when you take } 25\% \text{ of } 24 \text{ it is } 18 \]
\[ \text{and then when you take } 25\% \text{ of } 18 \text{ it is } 13.5 \]
\[ \text{and the } 25\% \text{ percent off that would be } \]
\[ \underline{10.25}. \]
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
24 (0.25) &= 6 \\
24 - 6 &= 18 \\
18 (0.25) &= 4.5 \\
18 - 4.5 &= 13.5 \\
13.5 (0.25) &= 3.25 \\
13.5 - 3.25 &= 10.25
\end{align*}
\]

$10.25$

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[
10.25 \div 0.25 = 41\%
\]
25% Sale

This problem gives you the chance to:

• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale? $ \$24$

Show your calculations.

\[
\begin{align*}
0.25 \times 32 &= 8 \\
32 - 8 &= 24
\end{align*}
\]

In the second week of the sale, the prices are reduced by 25% of the previous week's price. In the third week of the sale, the prices are again reduced by 25% of the previous week's price. In the fourth week of the sale, the prices are again reduced by 25% of the previous week's price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because $4 \times 25\% = 100\%$.

Explain why Julie is wrong.

Because each time you reduce the price of the jacket is different making the money you save each time less.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay? $10.12

Show your calculations.

\[ \begin{align*}
24 \times 0.75 &= 18 \\
18 \times 0.75 &= 13.5 \\
13.5 \times 0.75 &= 10.12 \\
\end{align*} \]

4. Julie buys her jacket after the four reductions. What percentage of the original price does she save? 100%

Show your calculations.

\[ 25\% \times 4 = 100\% \]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale?
   $24
   Show your calculations.

   \[32 \div 4 = 8\]
   \[32 - 8 = 24\]

In the second week of the sale, the prices are reduced by 25% of the previous week's price.
In the third week of the sale, the prices are again reduced by 25% of the previous week's price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week's price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \(4 \times 25\% = 100\%\).

   Explain why Julie is wrong.
   Because it doesn't keep taking 25% of the first price, it takes it off of the nearest one.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
32 \div 4 &= 8 \\
24 \div 4 &= 6 \\
16 \div 4 &= 4 \\
13 \div 4 &= 3.25
\end{align*}
\]

$28.25

4. Julie buys her jacket after the four reductions.
What percentage of the original price does she save?

Show your calculations.

\[
\begin{align*}
100 \div 33 &= 3.03 \\
100 - 3.03 &= 96.97
\end{align*}
\]

98%
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?

   Show your calculations.

   \[
   \begin{align*}
   \frac{32}{.75} & = 42.6666 \approx 42.67 \\
   24 & = 24.00 \\
   \end{align*}
   \]

   In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
   In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
   In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \(4 \times 25\% = 100\%\).

   Explain why Julie is wrong.

   Because the prices aren't reduced by 25% of the original price, each time the price gets lower, the reduction gets lower.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{array}{ccc}
24 & 18 & 13.5 \\
7.5 & 7.5 & -7.5 \\
120 & 108 & 67.5 \\
16 & 9.2 & 94.5 \\
1600 & 1350 & 1012.5 \\
16 & 9.2 & 10.13
\end{array}
\]

$10.13$

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[
\begin{array}{c}
32.00 \\
-10.13 \\
21.87
\end{array}
\]

\[
\begin{array}{c}
21.87 = 32x \\
\frac{21.87}{32} = \frac{32x}{32} \\
0.69 = x
\end{array}
\]

\[
\begin{array}{c}
2.870 \\
0.70 \\
0.64 \\
0.6
\end{array}
\]

$40.2\%$
25% Sale

This problem gives you the chance to:
- work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?
   Show your calculations.  
   \[ 32 \cdot 0.25 = 8 \]
   \[ 32 - 8 = 24 \]$ 24

In the second week of the sale, the prices are reduced by 25% of the previous week’s price. 
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price. 
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).

   Explain why Julie is wrong.
   \[
   \begin{align*}
   24 \cdot 0.25 &= 6, \quad 24 - 6 = 18 \\
   18 \cdot 0.25 &= 4.50, \quad 18 - 4.50 = 13.50 \\
   13.50 \cdot 0.25 &= 3.38, \quad 13.50 - 3.38 = 10.12,
   \end{align*}
   \]
   \[ 10.12 \text{ will be your final price.} \]
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
24 \times .25 &= 6, \\
24 - 6 &= 18 \\
18 \times .25 &= 4.50, \\
18 - 4.50 &= 13.50 \\
13.50 \times .25 &= 3.38, \\
13.50 - 3.38 &= 10.12
\end{align*}
\]

\[\$10.12\]

4. Julie buys her jacket after the four reductions. What percentage of the original price does she save?

Show your calculations.

\[
\frac{32 - 10.12}{32} = \frac{21.88}{32} = 68.31\%
\]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale?
   
   Show your calculations.

   $ 24

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions
   because 4 x 25% = 100%.

   Explain why Julie is wrong.
   
   Because it takes 25% off of the 75% price.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay? 

$10,125$

Show your calculations.

4. Julie buys her jacket after the four reductions. 

What percentage of the original price does she save? 

$31.64\%$

Show your calculations.
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale?
   Show your calculations.

\[ 32 \times 0.75 = 24 \]

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions
   because $4 \times 25\% = 100\%$.

   Explain why Julie is wrong.

   Because, say she wants to buy a coat for $100. $100 \times 0.75 = 75\%$
   $\times 0.75 = 56.25$.
   $25 \times 0.75 = 18.75$.
   $42.19 \times 0.75 = 81.64$
   Not $0$
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
32 \times 0.25 &= 24 \\
24 \times 0.25 &= 18 \\
18 \times 0.75 &= 13.5 \\
13.5 \times 0.75 &= 10.125
\end{align*}
\]

\[
\frac{10.125}{32} = \frac{x}{100}
\]

\[
(100) \cdot 31.65 = \frac{x}{100}
\]

\[
31.65 = x
\]

\[\text{S} \quad 10.13\]

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[
\frac{10.125}{32} = \frac{x}{100}
\]

\[
(100) \cdot 31.65 = \frac{x}{100}
\]

\[
31.65 = x
\]

\[\text{S} \quad 31.7\%\]
In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale? Show your calculations.

\[ 32 \div 4 = 8.00 \]
\[ 32 - 8 = 24 \]
$24.00

In the second week of the sale, the prices are reduced by 25% of the previous week's price. In the third week of the sale, the prices are again reduced by 25% of the previous week's price. In the fourth week of the sale, the prices are again reduced by 25% of the previous week's price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).

Explain why Julie is wrong.

\[
\text{You need to divide the current price by 4. Then subtract } \frac{1}{4}.\]
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[ 24 \div 4 = 6 \quad \times \quad 24 - 6 = 18 \]
\[ 18 \div 4 = 4.50 \quad \times \quad 18 - 4.50 = 13.50 \]
\[ 13.50 \div 4 = 3.37 \quad \times \quad 13.50 - 3.37 = 10.13 \]

$10.13$

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[ 100 \times 4 = 400 \]
\[ \frac{4}{16} \rightarrow \frac{2}{8} \rightarrow 50\% \]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?
   Show your calculations.

   $ \frac{25}{32} \cdot 100 \quad $ $24.00$

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because $4 \times 25\% = 100\%$.
   Explain why Julie is wrong.

   Because the price will actually be $\text{ß}$
   since it only goes down about \text{ß} each time
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
32 & \quad \frac{25}{100} \quad 2.4 \\
24 & \quad \frac{25}{100} \quad 6 \\
18 & \quad \frac{25}{100} \quad 4.5 \\
13.5 & \quad \frac{25}{100}
\end{align*}
\]

$\underline{10.13}$

4. Julie buys her jacket after the four reductions.
What percentage of the original price does she save?

Show your calculations.

\[
\text{Percentage saved} = \frac{\text{Original Price} - \text{Final Price}}{\text{Original Price}} \times 100\%
\]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale.
   How much does it cost in the sale? $24
   Show your calculations.

   \[ 0.25 \times 32 = 8 \]
   \[ 32 - 8 = 24 \]

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).

   Explain why Julie is wrong.

   No, because it is 25% off of each week's price
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
24 & - 8 \\
24 \cdot 0.25 & = 6 \\
18 & - 0.24 = 18.00 \\
13.50 & - 5.38 \\
\hline
\text{\$10.13} & \\
\end{align*}
\]

4. Julie buys her jacket after the four reductions. What percentage of the original price does she save?

Show your calculations.

\[\frac{31.6}{100} \quad \text{or} \quad 32.0\%\]

\[\$10.13 / 32\]
25% Sale

This problem gives you the chance to:
- work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?
   Show your calculations.

   \[
   \frac{8}{32} = \frac{25}{100} \quad 32 - 8 = 24
   \]

   In the second week of the sale, the prices are reduced by 25% of the previous week's price.
   In the third week of the sale, the prices are again reduced by 25% of the previous week's price.
   In the fourth week of the sale, the prices are again reduced by 25% of the previous week's price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).

   Explain why Julie is wrong.

   because it's not 25% of the original price but of the reduced one.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay? 

Show your calculations.

\[
\frac{25}{100} \times 24 - 6 = 18
\]

\[
\frac{25}{100} \times 18 - 4.5 = 13.5
\]

\[
\frac{25}{100} \times \frac{375}{13.5} = 10.125
\]

4. Julie buys her jacket after the four reductions. What percentage of the original price does she save? 

Show your calculations.

\[
\frac{31.64}{100} \times 125
\]

\[
\frac{32}{100}
\]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?

   Show your calculations.

   $\frac{32 \times 0.75}{64} = \frac{24}{24}$

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because $4 \times 25\% = 100\%$.

   Explain why Julie is wrong.

   The 1st week it was $24. The 2nd week it was $18.
The 3rd week it was $13.50. The 4th week it was about $10.13.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
24 \times \frac{24}{60} &= \frac{18}{18} \\
\frac{18}{18} &- \frac{45}{13.5} \\
\frac{3.375}{13.5} &- 3.375 \\
\frac{10.125}{10.125} &= 10.13
\end{align*}
\]

$10.13$

4. Julie buys her jacket after the four reductions. What percentage of the original price does she save?

Show your calculations.

\[
\begin{align*}
32 \times \frac{.68}{.68} &= \frac{21.76}{10.24}
\end{align*}
\]

\[
\begin{align*}
&= \frac{32}{21.76} \\
&= \frac{21.76}{10.24}
\end{align*}
\]

About 68%
In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale?
   
   Show your calculations.
   
   $32 \times 0.25 = 8 \times 3$

   $\text{In the second week of the sale, the prices are reduced by 25\% of the previous week's price.}$
   
   In the third week of the sale, the prices are again reduced by 25\% of the previous week's price.
   
   In the fourth week of the sale, the prices are again reduced by 25\% of the previous week's price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because $4 \times 25\% = 100\%$.

   Explain why Julie is wrong.
   
   She is wrong because on the 2nd week the price of the jacket would be 25\% of $24$.
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[ 13.5 \times 0.25 = 3.375 \times 3 = 10.125 \]

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[ \underline{32} \% \]
25% Sale

This problem gives you the chance to:
• work with percentage increase and decrease

In a sale, all the prices are reduced by 25%.

1. Julie sees a jacket that cost $32 before the sale. How much does it cost in the sale? $24.00
   Show your calculations.
   \[
   32 = 100\% \\
   32 - 25\% = \text{sale} \\
   32 - \frac{1}{4} \cdot 32 = 24
   \]

In the second week of the sale, the prices are reduced by 25% of the previous week’s price.
In the third week of the sale, the prices are again reduced by 25% of the previous week’s price.
In the fourth week of the sale, the prices are again reduced by 25% of the previous week’s price.

2. Julie thinks this will mean that the prices will be reduced to $0 after the four reductions because \( 4 \times 25\% = 100\% \).
   Explain why Julie is wrong.
   \[
   \text{it's not the original price which is reduced, it's the new price. That's means, that you reduce } \text{sale} \quad \text{and then you reduce the reduced price and so on}
   \]
3. If Julie is able to buy her jacket after the four reductions, how much will she have to pay?

Show your calculations.

\[
\begin{align*}
32 - 25\% &= 24 \\
24 - 25\% &= 18 \\
18 - 25\% &= 13.5 \\
13.5 - 25\% &= 10.125
\end{align*}
\]

\$10.13

4. Julie buys her jacket after the four reductions.

What percentage of the original price does she save?

Show your calculations.

\[
\begin{align*}
32 \times 100\% &= 100\% \\
10.125 &= 31.66\%
\end{align*}
\]