



# Variables and expressions

## Grade 5 Pre-Algebra Worksheet

Write an expression to answer each question. State what the variable is.  
The first one is done for you as an example.

|                                                                                                                                        | <u>Expression</u> | <u>Variable</u>                            |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|
| <i>John scored 3 more points than James. How many points did John score?</i>                                                           | $p + 3$           | $p = \text{number of points James scored}$ |
| 1. Jasmine is three times as old as her brother Michael. How old is Jasmine?                                                           | _____             | _____                                      |
| 2. Carl has $n$ colored-pens for his artwork. If his mother gives him 11 more colored pens, how many colored-pens does he have in all? | _____             | _____                                      |
| 3. Jimmy works 20 days in a month. If he was absent for $d$ days last month, how many days did he work?                                | _____             | _____                                      |
| 4. Sarah has $m$ baskets of mangoes. If she will be able to sell 8 baskets of mangoes, how many baskets of mangoes will be left?       | _____             | _____                                      |
| 5. Dennis shared his $p$ marbles among his 5 friends. How many marbles did each friend receive?                                        | _____             | _____                                      |
| 6. Jenny earns \$2 for every dress she manages to sell. How much will she earn for $b$ dresses?                                        | _____             | _____                                      |
| 7. Sonny has 12 more playing cards than Jamie. How many playing cards does Sonny have?                                                 | _____             | _____                                      |
| 8. The width of the rectangle is 12 cm shorter than its length. What is the measurement of the width?                                  | _____             | _____                                      |
| 9. Anne bought a laptop for \$ $w$ after receiving a discount of \$15. What is the original price of the laptop?                       | _____             | _____                                      |
| 10. Flynn bought $n$ pairs of socks for a total of \$8. How much is each pair of socks?                                                | _____             | _____                                      |



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Write an expression to answer each question. State what the variable is.  
The first one is done for you as an example.

|                                                                                                                                        | <u>Expression</u> | <u>Variable</u>                               |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------|
| <i>John scored 3 more points than James. How many points did John score?</i>                                                           | $p + 3$           | $p = \text{number of points James scored}$    |
| 1. Jasmine is three times as old as her brother Michael. How old is Jasmine?                                                           | $3m$              | $m = \text{age of Michael}$                   |
| 2. Carl has $n$ colored-pens for his artwork. If his mother gives him 11 more colored pens, how many colored-pens does he have in all? | $n + 11$          | $n = \text{number of colored pens Carl have}$ |
| 3. Jimmy works 20 days in a month. If he was absent for $d$ days last month, how many days did he work?                                | $20 - d$          | $d = \text{number of days of absent}$         |
| 4. Sarah has $m$ baskets of mangoes. If she will be able to sell 8 baskets of mangoes, how many baskets of mangoes will be left?       | $m - 8$           | $m = \text{number of basket of mangoes}$      |
| 5. Dennis shared his $p$ marbles among his 5 friends. How many marbles did each friend receive?                                        | $\frac{p}{5}$     | $p = \text{number of marbles}$                |
| 6. Jenny earns \$2 for every dress she manages to sell. How much will she earn for $b$ dresses?                                        | $\$2b$            | $b = \text{number of dress}$                  |
| 7. Sonny has 12 more playing cards than Jamie. How many playing cards does Sonny have?                                                 | $j + 12$          | $j = \text{number of playing cards of Jamie}$ |
| 8. The width of the rectangle is 12 cm shorter than its length. What is the measurement of the width?                                  | $l - 12$          | $l = \text{length of the rectangle}$          |
| 9. Anne bought a laptop for \$ $w$ after receiving a discount of \$15. What is the original price of the laptop?                       | $\$w + \$15$      | $w = \text{discounted price of laptop}$       |
| 10. Flynn bought $n$ pairs of socks for a total of \$8. How much is each pair of socks?                                                | $\frac{8}{s}$     | $s = \text{number of pair of socks}$          |