14. (a) Find the value of $\frac{4n + 3}{5}$ when $n = 8$.

$\frac{4n}{5} \frac{3}{} = \frac{4 \times 8 + 3}{5} =$ ■

(b) Find the value of $\frac{45 - 3r}{3}$ when $r = 5$.

$\frac{45 - 3r}{3} = \frac{45 - 3 \times 5}{3} =$ ■

15. We write $y \times y$ as y^2.
Find the value of the following when $y = 3$.

(a) y^2

$y^2 = 3 \times 3 =$ ■

(b) $2y^2$

$2y^2 = 2 \times 3 \times 3 =$ ■

(c) $\frac{y^2}{5}$

$\frac{y^2}{5} = \frac{3 \times 3}{5} =$ ■

16. We write $a \times a \times a$ as a^3.
Find the value of the following when $a = 2$.

(a) a^3

$a^3 = 2 \times 2 \times 2 =$ ■

(b) $a^3 + 1$

$a^3 + 1 = 2 \times 2 \times 2 + 1 =$ ■

(c) $a^2 + a^3$

$a^2 + a^3 = 2 \times 2 + 2 \times 2 \times 2 =$ ■

17. Find the value of each of the following when $a = 5$.

(a) $\frac{4a}{3}$ (b) $8 + 3a$ (c) $2a - 3$

(d) $\frac{a}{3} + 2$ (e) $\frac{3a - 4}{2}$ (f) $\frac{2a + 5}{5}$

(g) $2a^2 - 3$ (h) $a^3 + 5$ (i) $a^3 - a$

Workbook Exercise 1

1 Algebra

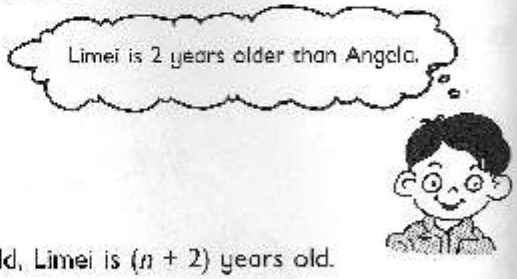
1 Algebraic Expressions

Angela and Limei make the following table to compare their ages.

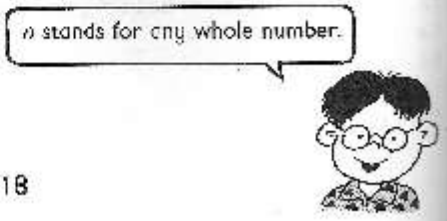
Angela's age	Limei's age
6	8
7	9
8	10
9	11
10	12

When Angela is 12 years old, how old is Limei?

When Angela is 15 years old, how old is Limei?



When Angela is n years old, Limei is $(n + 2)$ years old.

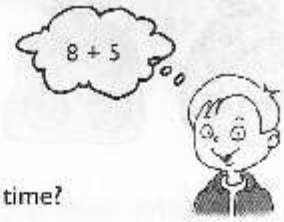


When $n = 16$, $n + 2 = 16 + 2 = 18$

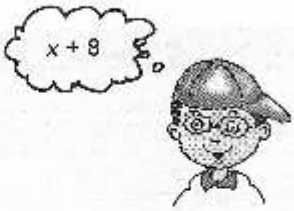
When $n = 20$, $n + 2 =$ ■

1. Alan is 8 years old.

(a) How old will he be in 5 years' time?

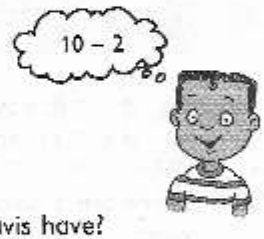


(b) How old will he be in x years' time?
Give the answer in terms of x.



2. Jim has \$2 more than Travis.

(a) If Jim has \$10, how much money does Travis have?



(b) If Jim has \$$m$, how much money does Travis have?
Give the answer in terms of m.

3. Tracy bought w kg of flour. She used 5 kg of it.

(a) Express the amount of flour left in terms of w.

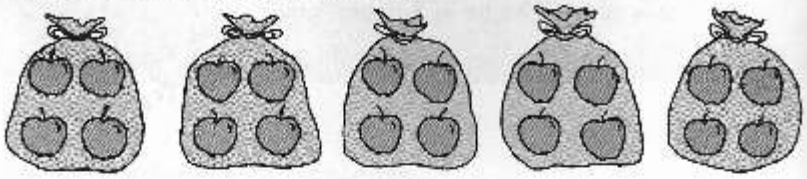
Amount of flour left = (w 5) kg

(b) If Tracy bought 8 kg of flour, how much flour did she have left?

$w - 5 = 8 - 5 =$ ■

She had ■ kg of flour left.

4. There are 4 apples in each packet.



(a) How many apples are there in n packets?

Number of packets	Total number of apples
1	$4 \times 1 = 4$
2	$4 \times 2 = 8$
3	$4 \times 3 = 12$
4	$4 \times 4 = 16$
5	$4 \times 5 = 20$
n	$4n$

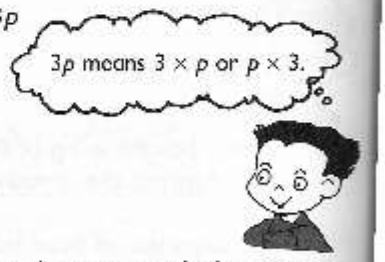
(b) If $n = 8$, how many apples are there altogether?

(c) If $n = 11$, how many apples are there altogether?

5. There are 3 boxes of chicken wings. Each box contains p chicken wings.

(a) Express the total number of chicken wings in terms of p.

Total number of chicken wings = $3p$

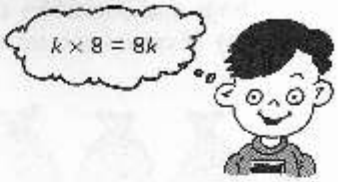


(b) If each box contains 7 chicken wings, how many chicken wings are there altogether?

$3p = 3 \times 7 =$ ■

There are ■ chicken wings altogether.

6. A rectangular tile measures k cm by 8 cm. Express its area in terms of k.

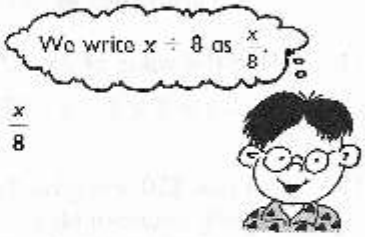


7. Ali has 8 boxes. He puts an equal number of marbles in each box.

(a) If there are 96 marbles, find the number of marbles in each box.

Number of marbles in each box $= \frac{96}{8} = \blacksquare$

(b) If there are x marbles, find the number of marbles in each box in terms of x.



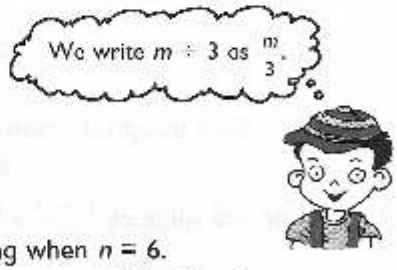
Number of marbles in each box $= \frac{x}{8}$

8. Meihua bought 3 books.

(a) If the total cost of the books is \$12, find their average cost.

Average cost $= \frac{\$12}{3} = \$\blacksquare$

(b) If the total cost of the books is \$$m$, find their average cost in terms of m.



Average cost $= \frac{\$m}{3} = \$\frac{m}{3}$

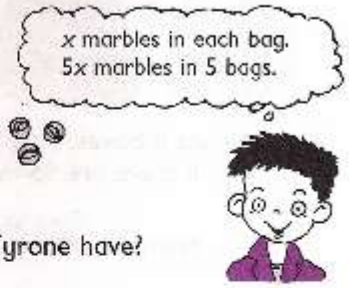
9. Find the value of each of the following when $n = 6$.

(a) $n + 4$	(b) $10 + n$	(c) $15 - n$
(d) $n - 6$	(e) $4n$	(f) $10n$
(g) $\frac{n}{2}$	(h) $\frac{n}{6}$	(i) $\frac{n}{12}$

We look Exercise 1

10. Tyrone has some marbles. He puts x marbles in a bag. There are 5 bags and 3 marbles altogether.

(a) Express the total number of marbles in terms of x.



Total number of marbles = $5x + 3$

(b) If $x = 10$, how many marbles does Tyrone have?

$5x + 3 = 5 \times 10 + 3 =$ ■

Tyrone has ■ marbles.

11. Find the value of $2x - 3$ when $x = 5$.

$2x - 3 = 2 \times 5 - 3 =$ ■

12. Jeff had \$50. He gave \$$y$ to his son. The remainder was then shared equally between his two daughters.

(a) Express each daughter's share in terms of y.

Amount of money shared by the daughters = \$$(50 - y)$

Amount of money each daughter received = $\$\frac{50 - y}{2}$

(b) If $y = 12$, how much money did each daughter receive?

$\frac{50 - y}{2} = \frac{50 - 12}{2} =$ ■

Each daughter received \$■.

13. Find the value of $\frac{x - 4}{2}$ when $x = 12$.

$\frac{x - 4}{2} = \frac{12 - 4}{2}$

$= \frac{8}{2}$

$=$ ■