

## EXERCISE 10 – English to Algebra

Write an algebraic statement for each of the problems below:

1. The sum of $x$ and five times $y$ .	
2. The difference between $a$ and twice $b$ .	
3. Three times the product of $m$ and $n$ .	
4. Three quarters of $x$ .	
5. Half the sum of $a$ and $b$ .	
6. Four more than the 3 times $x$ .	
7. Five less than half $x$ .	
8. The average of $a$ and $b$ .	
9. The product of $a$ and the square of $b$ .	
10. The sum of the squares of $x$ and $y$ .	
11. The square of the sum of $x$ and $y$ .	
12. The sum of a certain number and its square.	
13. Twice the square root of $x$ .	
14. The sum of two consecutive integers is 15.	
15. The product of two consecutive even integers is 120.	

### Exercise 10. – ANSWERS

- |   |                            |                    |                    |
|---|----------------------------|--------------------|--------------------|
| 1. $x+5y$   | 2. $a-2b$                  | 3. $3mn$           | 4. $\frac{3x}{4}$  |
| 5. $\frac{a+b}{2}$  | 6. $3x+4$                  | 7. $\frac{x}{2}-5$ | 8. $\frac{a+b}{2}$ |
| 9. $ab^2$   | 10. $x^2+y^2$              | 11. $(x+y)^2$      | 12. $x+x^2$        |
| 13. $2\sqrt{x}$   | 14. $x+(x+1)=15$           |                    |                    |
| 15. $x(x+2)=120$  | 16. The sum of $a$ and $b$ |                    |                    |
| 17. Five more than $x$ .                                  | 18. Four less than $x$     |                    |                    |
| 19. Half the sum of $x$ & $y$ (the average of $x$ & $y$ ) |                            |                    |                    |
| 20. The sum of the squares of $a$ and $b$ .               |                            |                    |                    |

### HW Sheet (4) – Answers

- |                     |                       |
|---------------------|-----------------------|
| (1) $2x+7$          | (11) $3x+1$           |
| (2) $n+5$           | (12) $11+12+13$       |
| (3) $m-5$           | (13) $ym$ kph         |
| (4) $\frac{xy}{2}$  | (14) $180-4x$         |
| (5) $\frac{a+b}{2}$ | (15) $\frac{xy}{100}$ |
| (6) $x-4$           | (16) $3n/2$           |
| (7) $2x^2$          | (17) $\frac{100a}{b}$ |
| (8) $x/12$          | (18) $(x-1)^2$        |
| (9) $6a+12$         | (19) $60H+M$          |
| (10) $a^2+b^2$      | (20) —                |

HOMWORK SHEET (A)

Write expressions for the following (in words)

- (1) The sum of 7 and twice  $x$  .....
- (2) Five more than  $n$  .....
- (3) 5 less than  $m$  .....
- (4) The product of  $y$  and half of  $x$  .....
- (5) The average of  $a$  and  $b$  .....
- (6) The difference between  $x$  and 4 .....
- (7) Twice the square of  $x$  .....
- (8) The ratio of  $x$  and 12 .....
- (9) Twelve more than the product of  $a$  and 6 .....
- (10) The sum of the squares of  $a$  and  $b$  .....
- (11) The next integer after  $3x$  .....
- (12) The sum of the first three consecutive integers after 10 .....
- (13) The distance travelled in  $y$  hours at  $m$  kilometres per hour. ....
- (14) The third angle of a triangle with  $x^\circ$  and  $3x^\circ$  as 2 of its angles .....
- (15)  $x\%$  of  $\$y$  .....
- (16)  $\$n$  is increased by 50% .....
- (17)  $a$  as a percentage of  $b$  .....
- (18) The area of a square with sides  $(x-1)$  cm long .....
- (19)  $H$  hours and  $M$  minutes expressed in minutes only .....

Write in words the following:-

- (20)  $2x - y$  .....
- (24)  $\frac{1}{2}(x + y)$  .....