EXERCISE 18(A)

1. Express each of the following statements in algebraic form:
(i) The sum of 8 and x is equal to y.
(ii) x decreased by 5 is equal to y.
(iii) The sum of 2 and x is greater than y.
(iv) The sum of x and y is less than 24.
(v) 15 multiplied by m gives 3n.
(vi) Product of 8 and y is equal to 3x.
(vii) 30 divided by b is equal to p.
(viii) z decreased by 3x is equal to y.
(ix) 12 times of x is equal to 5z.
(x) 12 times of x is greater than 5z.
(xi) 12 times of x is less than 5z.
(xii) 3z subtracted from 45 is equal to y.
(xiii) 8x divided by y is equal to 2z.
(xiv) 7y subtracted from 5x gives 8z.
(xv) 7y decreased by 5x gives 8z.
Solution:
(i) The sum of 8 and x is equal to y in algebraic form is written as,
$8 + x = y$
(ii) x decreased by 5 is equal to y in algebraic form is written as,
$x - 5 = y$
(iii) The sum of 2 and x is greater than y in algebraic form is written as,
$2 + x > y$
(iv) The sum of x and y is less than 24 in algebraic form is written as,
$x + y < 24$
(v) 15 multiplied by m gives 3n in algebraic form is written as,
$15 \times m = 3n$
(vi) Product of 8 and y is equal to 3x in algebraic form is written as,
$8 \times y = 3x$
(vii) 30 divided by b is equal to p in algebraic form is written as,
$30 \div b = p$
(viii) z decreased by 3x is equal to y in algebraic form is written as,
$z - 3x = y$
(ix) 12 times of x is equal to 5z in algebraic form is written as,
$12 \times x = 5z$
(x) 12 times of x is greater than 5z in algebraic form is written as,
$12 \times x > 5z$
(xi) 12 times of x is less than 5z in algebraic form is written as,

$12 \times x < 5z$
(xii) 3z subtracted from 45 is equal to y in algebraic form is written as,
$45 - 3z = y$
(xiii) 8x divided by y is equal to 2z in algebraic form is written as,
$8x \div y = 2z$
(xiv) 7y subtracted from 5x gives 8z in algebraic form is written as,
$5x - 7y = 8z$
(xv) 7y decreased by 5x gives 8z in algebraic form is written as,
$7y - 5x = 8z$

2. For each of the following algebraic expressions, write a suitable statement in words:
(i) $3x + 8 = 15$
(ii) $7 - y > x$
(iii) $2y - x < 12$
(iv) $5 \div z = 5$
(v) $a + 2b > 18$
(vi) $2x - 3y = 16$
(vii) $3a - 4b > 14$
(viii) $b + 7a < 21$
(ix) $(16 + 2a) - x > 25$
(x) $(3x + 12) - y < 3a$
Solution:
(i) The algebraic expression $3x + 8 = 15$ in words is expressed as,
3x plus 8 is equal to 15
(ii) The algebraic expression $7 - y > x$ in words is expressed as,
7 decreased by y is greater than x
(iii) The algebraic expression $2y - x < 12$ in words is expressed as,
2y decreased by x is less than 12
(iv) The algebraic expression $5 \div z = 5$ in words is expressed as,
5 divided by z is equal to 5
(v) The algebraic expression $a + 2b > 18$ in words is expressed as,
a increased by 2b is greater than 18
(vi) The algebraic expression $2x - 3y = 16$ in words is written as,
2x decreased by 3y is equal to 16
(vii) The algebraic expression $3a - 4b > 14$ in words is written as,
3a decreased by 4b is greater than 14
(viii) The algebraic expression $b + 7a < 21$ in words is written as,
b increased by 7a is less than 21

(ix) The algebraic expression $(16 + 2a) – x > 25$ in words is written as,
The sum of 16 and 2a decreased by x is greater than 25
(x) The algebraic expression $(3x + 12) – y < 3a$ in words is written as,
The sum of 3x and 12 decreased by y is less than 3a