1. $a < 0$
$b = 0$
$c = 25$

$y = (x + 5)(x - 5)$
$= x^2 - 25$

Persamaan graf / *Equation of the graph*
$y = x^2 + 25$

2. $f(x) = 3x^2 - 5x + c$

$3(-1)^2 - 5(-1) + c = 0$
$3 + 5 + c = 0$
$c = -8$

3. $y = x^2 - 4x + 3$

$1 = 2^2 - 4(2) + 3$
$1 = 4 - 8 + 3$
$1 \neq -1$

Titik (2, 1) tidak memuaskan persamaan $y = x^2 - 4x + 3$.
The point (2, 1) *does not satisfy the equation* $y = x^2 - 4x + 3$.

4. $A(x) = x(7 - x)$
$= 7x - x^2$

5. $y = ax^2 + bx + c$

(0, 0):
$0 = a(0)^2 + b(0) + c$
$c = 0$

(1, 5):
$5 = a(1)^2 + b(1) + c$
$5 = a + b + 0$
$5 = a + b$ .....①

(−1, 3):
$3 = a(-1)^2 + b(-1) + c$
$3 = a - b$ .....②

① + ②:
$8 = 2a$
$a = 4$

Dari / *From* ①:
$5 = a + b$
$5 = 4 + b$
$b = 1$

Maka, / *Thus*,
$a = 4, b = 1, c = 0$

6. $\dfrac{7x-13}{2}=\dfrac{3}{3x}$

$3x(7x-13)=2(3)$

$21x^2-39x-6=0$

$7x^2-13x-2=0$

$(7x+1)(x-2)=0$

$7x+1=0$ atau / *or* $x-2=0$

$x=-\dfrac{1}{7}$ $x=2$

$\therefore x=-\dfrac{1}{7}, 2$

7. $(x+5)^2=3x+43$

$(x+5)(x+5)=3x+43$

$x^2+10x+25=3x+43$

$x^2+10x-3x+25-43=0$

$x^2+7x-18=0$

$(x-2)(x+9)=0$

$x-2=0$ atau / *or* $x+9=0$

$x=2$ $x=-9$

$\therefore x=2,-9$

8. (a) Umur Fatimah / *Fatimah's age* $=x$

Umur Racheal / *Racheal's age* $=x-8$

Persamaan kuadratik / *Quadratic equation*

$x(x-8)=20$

$x^2-8x-20=0$

(b) $x^2-8x-20=0$

$(x-10)(x+2)=0$

$x-10=0$ atau / *or* $x+2=0$

$x=10$ $x=-2$ (Abaikan / *Ignore*)

Maka, Umur Racheal / *Thus, Racheal's age*

$=10-8$

$=2$

9. Katakan diameter satu bulatan / *Let the diameter of a circle* $=x$

$4x(x)=64$

$4x^2=64$

$x^2=16$

$x=4$

Maka, diameter satu bulatan ialah 4 m. / *Thus, the diameter of a circle is* 4 m.

10. (a) $-x^2-4x+21=0$

$x^2+4x-21=0$

$(x+7)(x-3)=0$

$x+7=0$ atau / *or* $x-3=0$

$x=-7$ $x=3$

(b) $a=-1<0$, maka graf berbentuk ∩.

$a=-1<0$, thus the shape of the graph is ∩.

Apabila / *When* $x=0$

$f(x)=-(0)^2-4(0)+21$

$=21$