



**EXAMPLE**

Solve the equation  $x^2 + 3x = 45$   
to one decimal place.

Target = 45		
$x$ estimate	$x^2 + 3x$	Comment
5	40	too low
6	54	too high
5.5	46.75	too high
5.4	45.36	too high
5.3	43.99	too low
5.35	44.6725	too low

The answer is closer to 5.4

The approximate answer (1dp) is: 5.4

**A**

Solve the equation  $x^2 + 5x = 59$   
to one decimal place.

Target = 59		
$x$ estimate	$x^2 + 5x$	Comment
6	66	too high
5	50	too low
5.5	57.75	too low
5.6	59.36	too high
5.55	58.5525	too low

The answer is closer to 5.6

The approximate answer (1dp) is: 5.6

**B**

Solve the equation  $x^3 - x^2 = 23$   
to one decimal place.

Target = 23		
$x$ estimate	$x^3 - x^2$	Comment
3	18	too low
4	48	too high
3.5	30.625	too high
3.4	27.744	too high
3.3	25.047	too high
3.2	22.528	too low
3.25	23.76563	too high

The answer is closer to 3.2

The approximate answer (1dp) is: 3.2

**C**

Solve the equation  $x^3 - 4x = 400$   
to one decimal place.

Target = 400		
$x$ estimate	$x^3 - 4x$	Comment
7	315	too low
8	480	too high
7.5	391.875	too low
7.6	408.576	too high
7.55	400.1689	too high

The answer is closer to 7.5

The approximate answer (1dp) is: 7.5

# Answers

