

PRIOR LEARNING

Arithmetic sequences and series

1 Write the next three numbers in each sequence.

a 3, 4, 6, 9, 13, _____, _____, _____

b 105, 101, 97, 93, 89, _____, _____, _____

c $1\frac{1}{2}$, $2\frac{3}{4}$, 4, $5\frac{1}{4}$, $6\frac{1}{2}$, _____, _____, _____

2 Complete each table.

a $y = 3x - 5$

x	1	2	3	4
y				

b $p = 4 - 3q$

p	4	6	10	12
q				

c $2n + 3m = 24$

n	12		3	1
m		6		

3 Solve each equation.

a $3n - 2 = 5n + 10$

c $n^2 + 5n - 6 = 0$ by factorisation

b $\frac{3n+5}{2} = 4n - 8$

d $3n^2 + 4n - 7 = 0$ using the formula

Answers

1 a 3, 4, 6, 9, 13, 18, 24, 31

b 105, 101, 97, 93, 89, 85, 81, 77

c $1\frac{1}{2}$, $2\frac{3}{4}$, 4, $5\frac{1}{4}$, $6\frac{1}{2}$, $7\frac{3}{4}$, 9, $10\frac{1}{4}$

2 a $y = 3x - 5$

x	1	2	3	4
y	-2	1	4	7

b $p = 4 - 3q$

p	4	6	10	-2
q	-8	-14	-26	10

c $2n + 3m = 24$

n	12	3	15	1
m	0	6	-2	$7\frac{1}{3}$

3 a $n = -4$

b $n = 4\frac{1}{5}$

c $n = -6$ or $n = 1$

d $n = \frac{-2 - 2\sqrt{7}}{3} \approx -2.43$ or $n = \frac{-2 + 2\sqrt{7}}{3} \approx 1.10$