

● ANSWERS

Unit 2

1 a $(x - 5)(x + 2)(x + 4)$

b $(x - 3)(x - 2)(x - 1)$

2 $x = -2$

$$x = \frac{3}{2}(-\sqrt{5} - 1) = -4.854$$

$$x = \frac{3}{2}(\sqrt{5} - 1) = 1.854$$

3 $k = 2$

$$k = 6$$

4 Has no solution

5 $x = 180^\circ$

6 $x = 11.81^\circ$

7 $x = 180^\circ$

8 $y = \frac{3}{4}x + 3$

9 -3

10 $\frac{-(2x + 1)}{x^2}$

11 $6x^2 - 6x + 1$

12 a $-\frac{1}{2}\cos x$

b $-8\sin x$

13 $\frac{(2x^2 - 1)}{\sqrt{x^2 - 1}}$

14 a $25ms^{-1}$

b $6.667s$

15 $\frac{u^4}{4} + \frac{2u^3}{3} - 3u^2 + 4u + c$

16 $4x^{\frac{3}{2}} + c$

17 $10\sqrt{x} + \frac{4}{7}x^{\frac{7}{2}} + c$

18 $\frac{591}{10} = 59.1$

19 $2(x + 2)^4 + c$

20 $6\sin\alpha + c$

21 3