

Basic Skills Test

MA1161 Spring 2007

Solutions

1. $3x - 8$
2. $(2x + 1)(2x - 1)$
3. $\frac{x+4}{x-6}$
4. $2x + 2h - x^2 - 2xh - h^2$
5. $\frac{-x-3}{x-3}$
6. $\frac{3(x-2)}{2}$
7. 21 cm^2
8. $2\sqrt{6}\pi$ meters
9. $\frac{7}{24}$
10. $\frac{-4 \pm \sqrt{8}i}{4}$
11. $\frac{2A}{h} - b_2$
12. The graph is of a straight line that goes through the points (0,3), (1,1), and (2,-1).
13. The graph is of a downward parabola that goes through the points (-4,0), (-2,4), and (0,0).
14. $\frac{1}{2}$
15. x^8
16. $\frac{1}{x^{2/3}}$
17. 1
18. 1
19. $-\frac{1}{2}$
20. The graph must start at 0 and end at 2π . It is a sine wave that goes through the points (0,0), $(\frac{\pi}{2}, 1)$, $(\pi, 0)$, $(\frac{3\pi}{2}, -1)$, and $(2\pi, 0)$.
21. $\frac{\sqrt{11}}{6}$
22. 60° or $\frac{\pi}{3}$
23. $-\frac{\sqrt{3}}{2}$
24. $\frac{\cos^2 x}{\sin x}$
25. $2 \sin t \cos t$