

Basic Skills Test

MA1161 Spring 2007

Solutions

1. $7x + 5$
2. $(4 - 3y)(4 + 3y)$
3. $\frac{x-3}{x+1}$
4. $2x^2 + 4xh + 2h^2 + 3x + 3h$
5. $\frac{5x-3}{1-x}$
6. $\frac{12}{x+5}$
7. 26 in
8. $36\pi \text{ ft}^2$
9. $\frac{-7}{24}$
10. $\frac{-3 \pm i\sqrt{7}}{-4}$
11. $\frac{A - \pi r^2}{2\pi r}$
12. The graph is of a straight line that goes through the points (2,0), (0,-1), and (2,-2).
13. The graph is of a upward parabola that goes through the points (-4,3), (-3,0), (-2,-1), (-1,0) and (0,3).
14. $\frac{1}{3}$
15. x^8
16. $\frac{1}{x^{1/3}}$
17. 1
18. 0
19. $\frac{\sqrt{2}}{2}$
20. The graph must start at 0 and end at 2π . It is a cosine wave that goes through the points (0,1), $(\frac{\pi}{2}, 0)$, $(\pi, -1)$, $(\frac{3\pi}{2}, 0)$, and $(2\pi, 1)$.
21. $\frac{\sqrt{33}}{7}$
22. 45° or $\frac{\pi}{4}$
23. 1
24. $\frac{\cos x}{\sin x}$
25. $2 - 2 \sin t \cos t$