

Homework #9

Factorise:

1. $6x^2 + 3x$

2. $g^2 - 8g$

3. $x^2 + 13x + 30$

4. $x^2 + 7x - 8$

5. $2p^2 + 8p$

6. $x^2 - 8x + 12$

7. $10xy + 4y^2$

8. $-4y - 16$

9. $x^2 - 7x + 10$

10. $-3x^2 - 9x$

11. $7k^2 + 7k$

12. $p^2 - p - 30$

13. $18x - 6$

14. $10x^2 + 8x$

15. $15 + 8x + x^2$

16. $x^2 - 64$

17. $3k^2 - 18$

18. $x + 3x^2$

19. $30 - 11k + k^2$

20. $p^2 + p^3$

21. $6y - 8$

22. $8x + x^2$

23. $25 + 10x + x^2$

24. $2x^2 + 16x + 30$

Answers: Homework #9

"Factorise" means fully factorise, so the answers given are the **only** possible ones

1. $6x^2 + 3x = 3x(x + 1)$
2. $g^2 - 8g = g(g - 8)$
3. $x^2 + 13x + 30 = (x + 10)(x + 3)$ or $(x + 3)(x + 10)$
4. $x^2 + 7x - 8 = (x + 8)(x - 1)$ or $(x - 1)(x + 8)$
5. $2p^2 + 8p = 2p(p + 4)$
6. $x^2 - 8x + 12 = (x - 2)(x - 6)$ or $(x - 6)(x - 2)$
7. $10xy + 4y^2 = 2y(5x + 2y)$
8. $-4y - 16 = -4(y + 4)$
9. $x^2 - 7x + 10 = (x - 5)(x - 2)$ or $(x - 2)(x - 5)$
10. $-3x^2 - 9x = -3x(x + 3)$
11. $7k^2 + 7k = 7k(k + 1)$
12. $p^2 - p - 30 = (p - 6)(p + 5)$ or $(p + 5)(p - 6)$
13. $18x - 6 = 6(3x - 1)$
14. $10x^2 + 8x = 2x(5x + 4)$
15. $15 + 8x + x^2 = x^2 + 8x + 15 = (x + 3)(x + 5)$ or $(x + 5)(x + 3)$
16. $x^2 - 64 = (x + 8)(x - 8)$ or $(x - 8)(x + 8)$
17. $3k^2 - 18 = 3(k^2 - 6)$
18. $x + 3x^2 = x(1 + 3x)$
19. $30 - 11k + k^2 = (k - 6)(k - 5)$ or $(k - 5)(k - 6)$
20. $p^2 + p^3 = p^2(1 + p)$
21. $6y - 8 = 2(3y - 4)$
22. $8x + x^2 = x(8 + x)$
23. $25 + 10x + x^2 = (x + 5)(x + 5)$ or $(x + 5)^2$
24. $2x^2 + 16x + 30 = 2(x^2 + 8x + 15) = 2(x + 3)(x + 5)$ or $2(x + 5)(x + 3)$