

Algebra Worksheet 2

Factorise the following expressions (put brackets in)

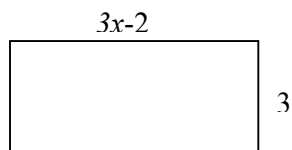
1. $3x + 6$
2. $8x - 4$
3. $12 + 3x$
4. $5y - 5$
5. $-2y + 4$
6. $3xy - y$
7. $5x^2 - x$
8. $18yx - 7x$
9. $5qz - 8q$
10. $-7qz + 14q$
11. $4x^2 - 2x$
12. $8xy - 2xy$
13. $7a^2 - 14ab$
14. $6tw - 12t^2$
15. $x^2y - yx$
16. $-8x^2 - 4xy$
17. $-9yx^2 + 6x^2$
18. $6zxy - 3xz$
19. $-4z^2x^2 + 2zx$
20. $8xy - 4xy^2z$
21. $15xyz + 2xz^3$

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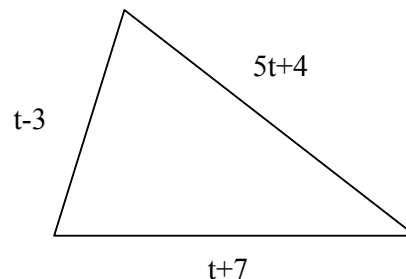
1. $2x + 6x^2 + 2$
2. $8x^2y - 4xy + 6y$
3. $3y - 9y + 6$
4. $7y - 14xy + 7y^2$
5. $-q^2 + 6q - qw$
6. $8x^3y - 4yx^2 + 6x^2$
7. $5ab - 5ba^2 + 5a^2b$
8. $-2x^2y + 6xy - x + 2x^2$
9. $3x^3y - 6yx^2 + 9x^2 - 3xy$
10. $10ab^3 - 5b^2a^2 + 5a^2b - 15ab^2$
11. $-xyz^3 - 5x^2y^2z + 5zy^2x - yx^2z$

Find an expression for the **perimeter** of the following shapes

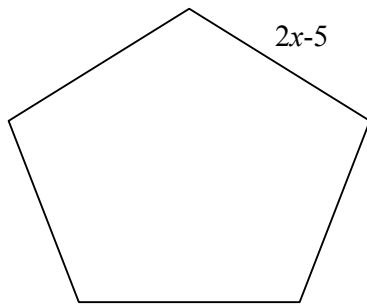
1.



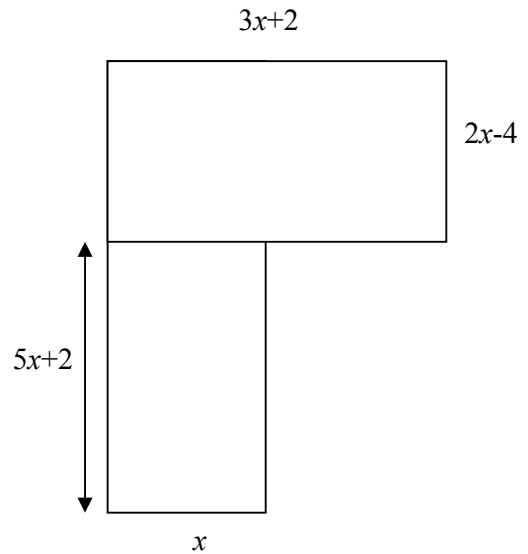
2.



3. The following is a regular pentagon



4.



5. I have p sweets, my brother has 5 sweets less than me and my father has 3 times as many as my brother. Find a simplified expression for the total number of sweets
6. If I had $3p-50$ pounds and received $2p+10$ pounds change. How much did I spend?
7. A wheel rotates $4x-2$ times every minute. Find a simplified expression for the number of times it rotates in one hour
8. Find expressions for the **area** of the following shapes

