Name:

Exam Style Questions

Collecting Like Terms

Corbettmaths

Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 9

Answers and Video Solutions

1. Simplify $y + y$

....
(1)

2. Circle the expression that is equal to $y + y + y - y$

$4y$ 3 $2y$ y^2

(1)

3. Simplify $4c + 2c$

....
(1)

4. Simplify $8x - 2x + 4x$

....
(1)

5.	(a)	Simplify	$a + a + a$

....
(1)

(b)	Simplify	$4a + 3a - a$

....
(1)

(c)	Simplify	$4ac + 5ac$

....
(1)

(d)	Simplify	$4c - 6c$

....
(1)

(e)	Simplify	$a^2 + a^2$

....
(1)

6. Simplify $6y - 5 + 2y$

....
(1)

7. (a) Simplify $m + m + m + m$

....
(1)

(b) Simplify $8c + 2p - 2c + 4p$

....
(2)

8. Simplify $3x + 4 - x + 7$

....
(2)

9. Simplify $6a + 5w - 2a + w$

....
(2)

10. Simplify $7x - 4y + 8x - y$

....
(2)

11. (a) Simplify $9y - 3y$

....
(1)

(b) Simplify $7y + 2w - 3y + 2w$

....
(2)

(c) Simplify $7y + 10 + 3y - 9$

....
(2)

12. Simplify $4x + 7y + x - 4y$

....
(2)

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13. Simplify $5x + y - 2x + y$

....
(2)

14. Simplify $3c - 10d - c + 4d$

....
(2)

15. Simplify $20x + 3y - 8y - 7x$

....
(2)

16. Simplify $8x - 6y + 3x - 3y$

....
(2)

17. (a) Simplify $s + s + s + s - s$

....
(1)

(b) Simplify $5c - 3s + 3c + 7s$

....
(2)

(c) Simplify $8a + 3c - 5c + 3a$

....
(2)

(d) Simplify $3a + 2w - 5a - 9w$

....
(2)

(e) Simplify $3y^2 + 2w^2 + y^2 - w^2$

....
(2)

18. (a) Simplify $2x + 2x$

....
(1)

(b) Simplify $7w - 2w$

....
(1)

(c) Simplify $3m - m$

....
(1)

(d) Simplify $y^2 + y^2 + y^2$

....
(1)

(e) Simplify $7h + 5k + h - 3k$

....
(2)

19. Troy is simplifying $x^3 + x^3$

He says the answer is $2x^6$

Explain why Troy is wrong.

....

....

(1)

20. Shown is a pentagon.
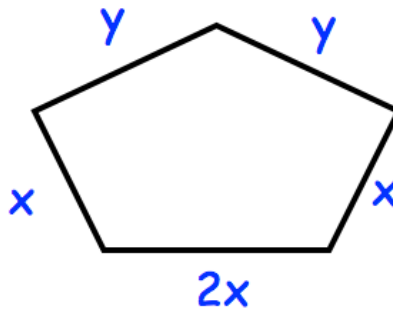
Find an expression, in terms of x and y, for the perimeter of the pentagon.

....

(2)

21. Shown is a equilateral triangle.
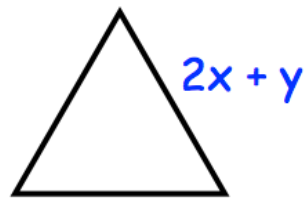
The length of each side is 2x + y

Find an expression, in terms of x and y, for the perimeter of the triangle.

....

(2)

22. Shown is a rectangle.
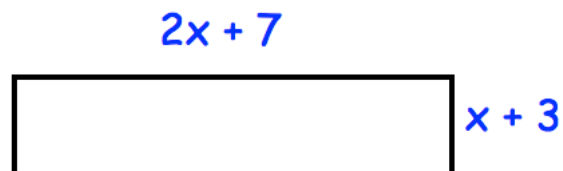
Find an expression, in terms of x, for the perimeter of the rectangle.

....

(2)

23. Simplify fully $2x^2 + 3x - 1 - x^2 + 2x - 5$

....

(2)

24. Below is a parallelogram and an isosceles triangle.

6x + 7

2x

7x + 5

2x + 3
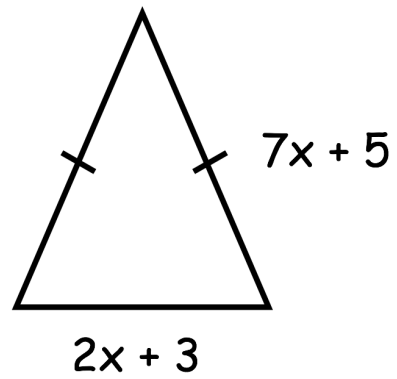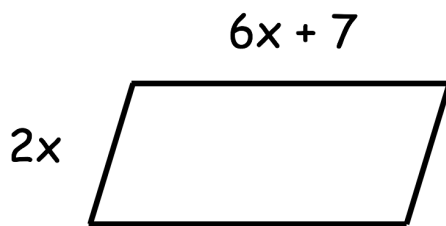
Which shape has the greatest perimeter?
Show your working.

....

(3)

25.

x

$3x + 3$

$x + 2$

$3x + 1$
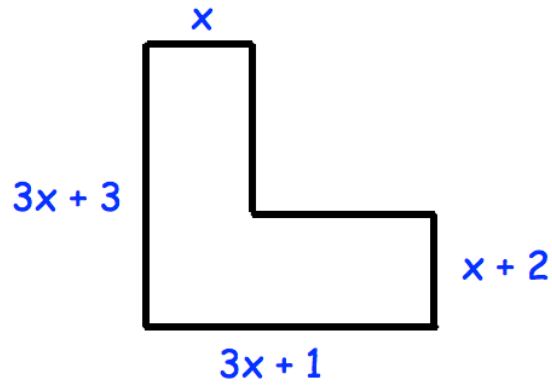
Find an expression, in terms of x, for the perimeter of this L shape.

....

(3)

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26. Here is an equilateral triangle and a regular pentagon.

$2x + 30$
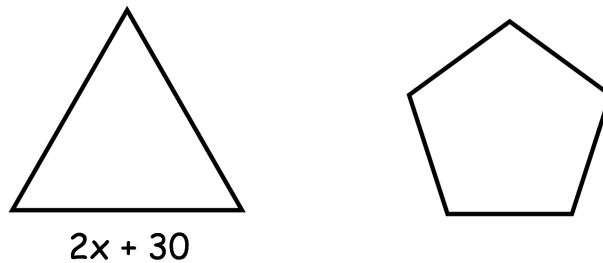
The perimeter of the two shapes are equal.

Find an expression for the length of each side of the regular pentagon.

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(4)

27. Expand and simplify $3(x + 6) + 8$

....

(2)

28. Simplify fully $9(y - 2) + 4y + 3$

....

(2)

29. Expand and simplify $5(x + 3y) + 2(2x - y)$

....

(3)

30. Expand and simplify $3(4x - 1) - 2(x + 4)$

....

(3)

31. Expand and simplify $3(4x + 8) - (7x - 2)$

....

(2)