

Forming and Solving Equations Worksheets

Worksheet 1 - Translating Phrases

Exercise 1: Change the following into Algebraic Expressions

1. The sum of x and 2
 2. p is divided by 8
 3. The difference between x and y . (x is the largest)
 4. The product of a and b
 5. 3 more than y
 6. 7 less than g
 7. 5 times f
 8. 3 more than the product of x and y
 9. d decreased by 16
 10. One-quarter of x
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Exercise 2: Change the following Algebraic Expressions into Statements

1. fg
 2. $h - 4$
 3. $5 + x$
 4. $2y$
 5. $\frac{h}{10}$
 6. $x + 8$
 7. $4 - x$
 8. $2(x + y)$
 9. $4pq$
 10. $\frac{d+f}{3}$
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Worksheet 2 - Word Problems leading to Equations

Exercise 1: For each of the following form an equation and solve it.

1. I think of a number, add 7 and the answer is 20. What was the number I first thought of?
 2. I think of a number, divide it by 3 and the answer is 18. What was the number I first thought of?
 3. When I think of a number, double it and add 5, the answer is 19. Find the initial number.
 4. If the product of 7 and an unknown number is 63, what is the value of this unknown number?
 5. The sum of 18 and an unknown number is 31. What is the value of the unknown number?
 6. If I think of a number, multiply it by 3 and subtract 3, the answer is 18. What was the number I first thought of?
 7. The product of 4, 5 and an unknown number is 200. Find the unknown number.
 8. If I half an unknown number and add 8, the answer is 14. What is the number I first thought of?
 9. When an unknown number is multiplied by 5 and divided by 2 the answer is 40. Find the unknown number.
 10. Find the number which, when tripled and added to 9 gives 21.
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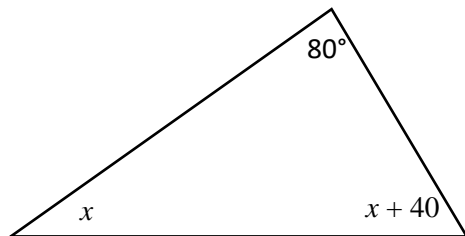
Exercise 2: For each of the following form an equation and solve it.

1. John is x years old and his brother is 3 years older. The sum of their ages is 11. How old is John?
2. Mark has x marbles and Sandra has twice as much. Together they have 33 marbles. How many marbles does Sandra have?
3. Kim runs a distance of x km whilst Jane runs 2 km less. Together they run a total of 8 km. How far did Kim run?
4. Jane has x Euros in her purse whilst Mary has €20 more. Together they have a total of €34. How much money does Jane have?
5. Karl ate x sweets whilst Jack ate 4 less. Together they ate 12. How much sweets did Karl eat?
6. Laila is 12 years old whilst her brother is x years old. The product of their ages is 108. How old is Laila's brother?

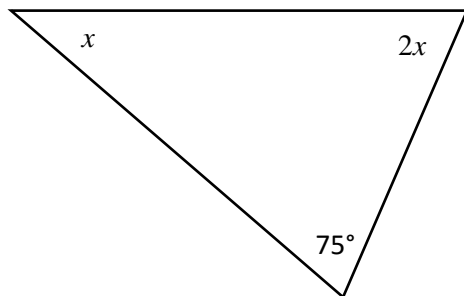
Worksheet 3 - Forming and Solving Equations Involving Shapes

Exercise 1: For each of the following shapes form an equation and solve it to find x .

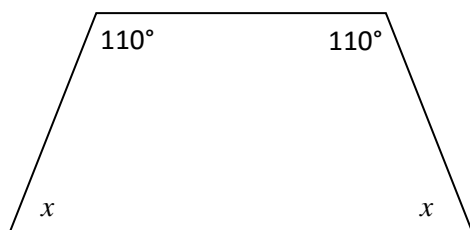
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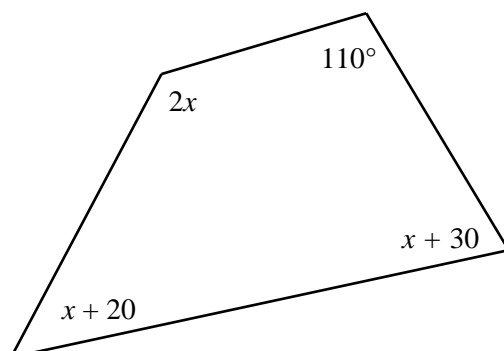
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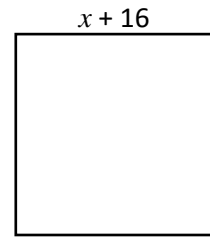


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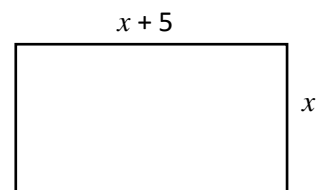


Exercise 2: For each of the following shapes, read the information given, form an equation and solve it to find the length of each side of the shape.

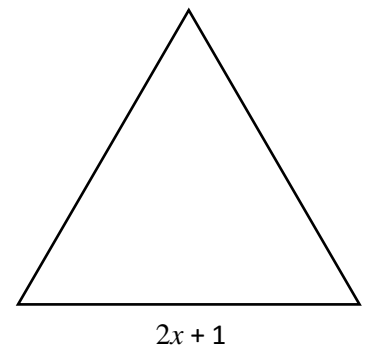
1. The perimeter of this square is 384 cm.



2. The perimeter of this rectangle is 190 cm.



3. The perimeter of this equilateral triangle is 99 cm.



4. The perimeter of this triangle is 152 cm.

