Parallelogram Name _____

per __ date _____

Definition: a quadrilateral in which both pairs of opposite sides are parallel. Because of that, we can prove that every parallelogram has the following set of ***properties***:

a. both pairs of opposite sides are parallel (of course, by definition); and
b. consecutive angles are supplementary,
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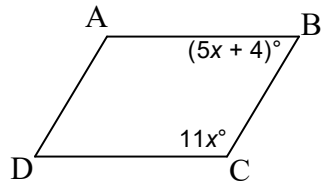
e. opposite sides are congruent, and
f. the diagonals bisect each other.

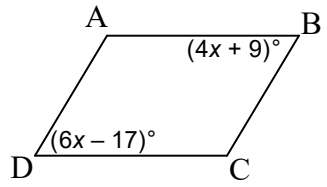
Lots of opportunities for algebra here.

ABCD is a parallelogram. (Maybe not to scale). **Solve for *x*.**

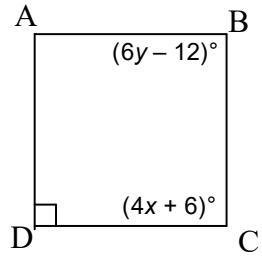
1. ***x*** = _____



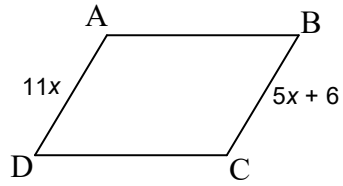
2. ***x*** = _____



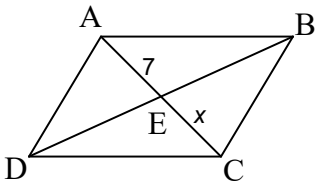
3. ***x*** = _____ , ***y*** = _____



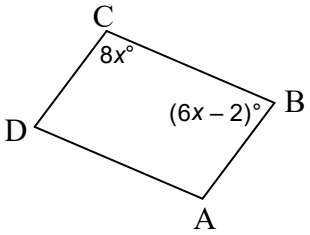
4. ***x*** = _____



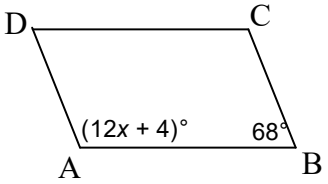
5. ***x*** = _____



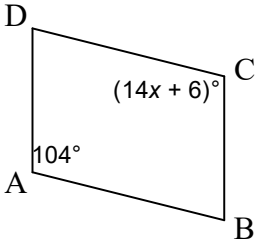
6. ***x*** = _____



7. ***x*** = _____



8. ***x*** = _____

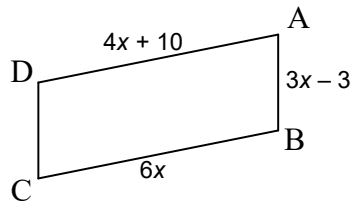


Parallelogram Name _____

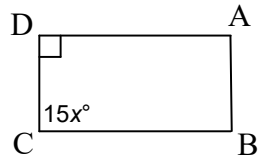
per __ date _____

All figures are parallelograms. Solve for the variable(s) indicated.

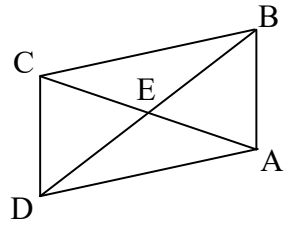
9. x = _____



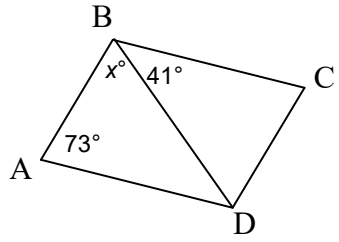
10. x = _____



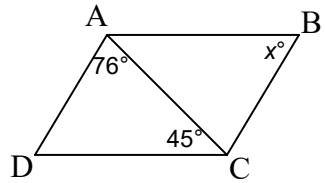
11. $BD = 23.4$; EB = _____



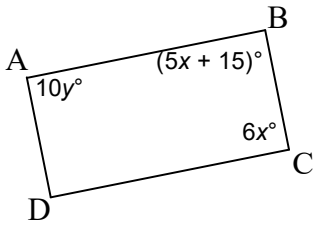
12. x = _____



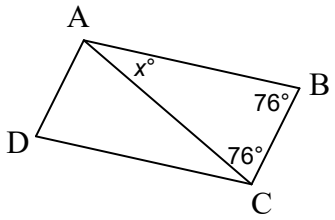
13. x = _____



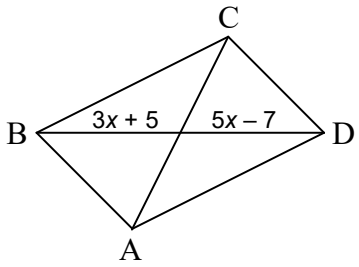
14. x = _____ , y = _____



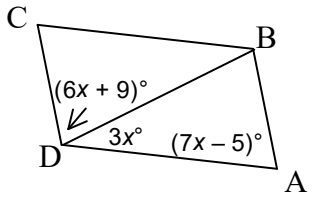
15. x = _____



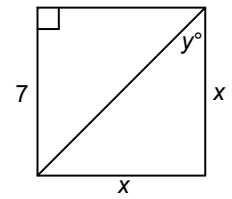
16. BD = _____



17. x = _____



18. x = _____, y = _____



Parallelogram Name _____

ANSWERS

per __ date _____

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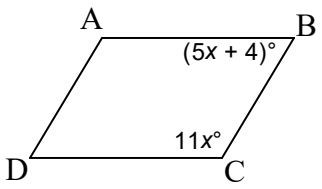
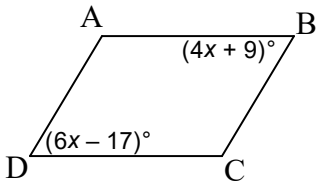
Lots of opportunities for algebra here.

ABCD is a parallelogram. (Maybe not to scale). **Solve for *x*.**

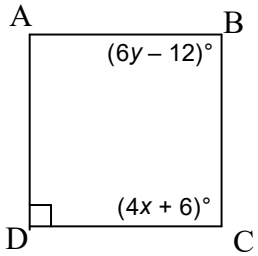
1. ***x*** = **_11_**



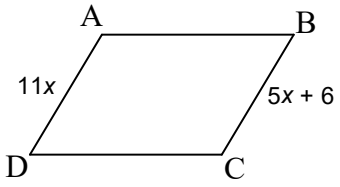
2. ***x*** = **_13_**



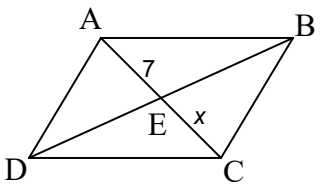
3. ***x*** = **_21_** , ***y*** = **_17_**



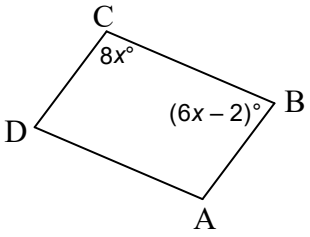
4. ***x*** = **_1_**



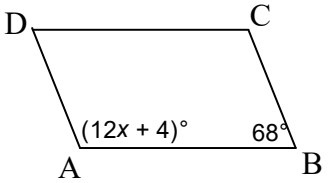
5. ***x*** = **_7_**



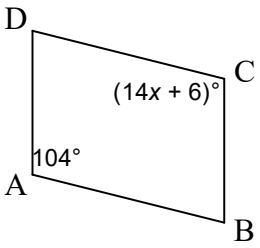
6. ***x*** = **_13_**



7. ***x*** = **_9_**



8. ***x*** = **_7_**



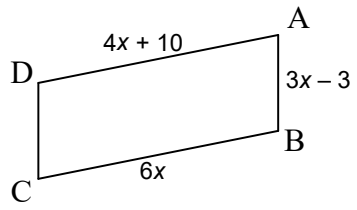
Parallelogram Name _____

ANSWERS

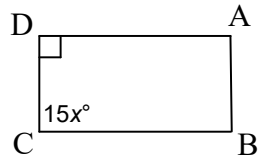
per __ date _____

All figures are parallelograms. Solve for the variable(s) indicated.

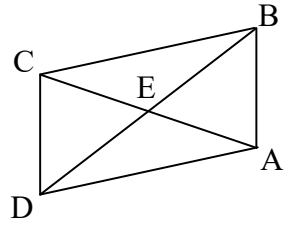
9. x = **_5_**



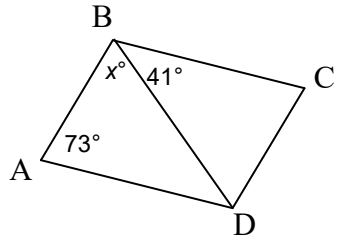
10. x = **_6_**



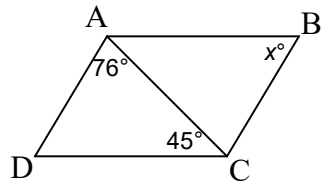
11. $BD = 23.4$; EB = **_11.7_**



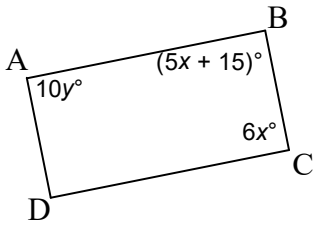
12. x = **_66_**



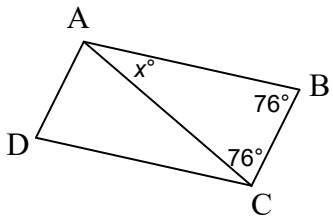
13. x = **_59_**



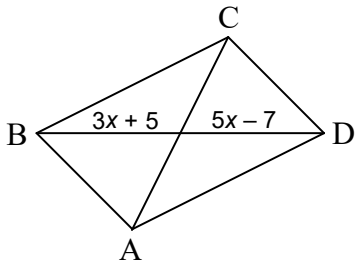
14. x = **_15_** , y = **_9_**



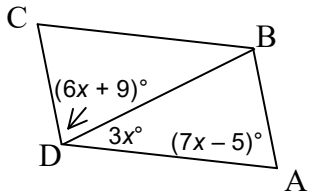
15. x = **_28_**



16. BD = **_46_**



17. x = **_11_**



18. x = **_7_**, y = **_45_**