Задачи на готовых чертежах

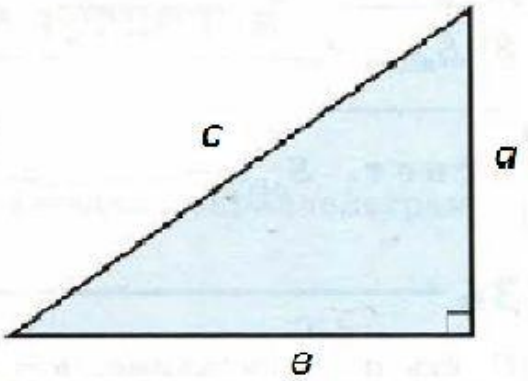
Теорема Пифагора

Повторение темы «Теорема Пифагора»

1. Посмотреть алгоритм и примеры решения задач - слайд 3;
2. Выполнить задания любого уровня – слайды с 4 по 9;
3. Задания выполнять в тетради.
4. На проверку приносить или отправлять не менее 8 задач (можно фото);
5. Задания должны быть отправлены 15, 16 февраля.

Пример вычисления сторон в прямоугольном треугольнике по теореме Пифагора

Теорема Пифагора



В прямоугольном треугольнике a и b — катеты.

Найдите: а) b, если $a = 8$, $c = 12$;

б) c, если $a = 4\sqrt{2}$, $b = 7$;

в) a, если $b = 3\sqrt{3}$, $c = 5\sqrt{3}$.

Р е ш е н и е. По теореме Пифагора $c^2 = a^2 + b^2$.

а) $b^2 = c^2 - a^2$, откуда $b = \sqrt{c^2 - a^2} = \sqrt{144 - 64} = \sqrt{80} = \sqrt{16 \cdot 5} = 4\sqrt{5}$

б) $c^2 = (4\sqrt{2})^2 + 7^2$, откуда $c = \sqrt{(4\sqrt{2})^2 + 7^2} = \sqrt{32 + 49} = \sqrt{81} = 9$

в) $a^2 = c^2 - b^2$, откуда $a = \sqrt{c^2 - b^2} = \sqrt{(3\sqrt{3})^2 - (5\sqrt{3})^2} = \sqrt{27 + 75} =$

$= \sqrt{102}$

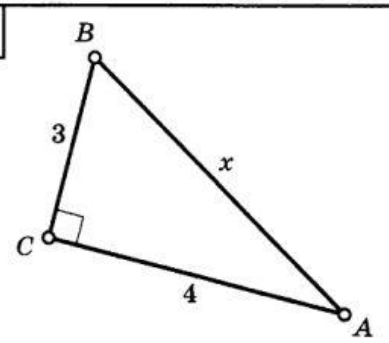
$(4\sqrt{2})^2 = 16 \cdot 2 = 32$

ТЕОРЕМА ПИФАГОРА

Найдите x.

1 уровень

1



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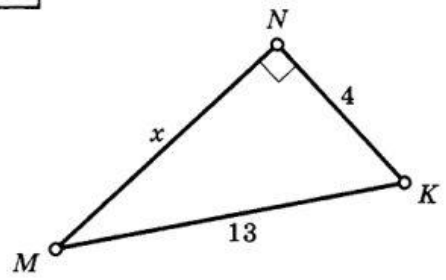

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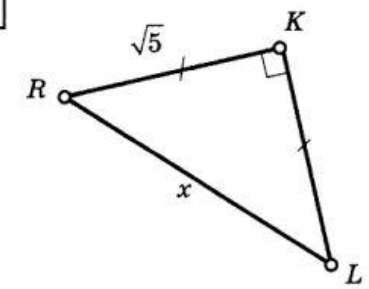

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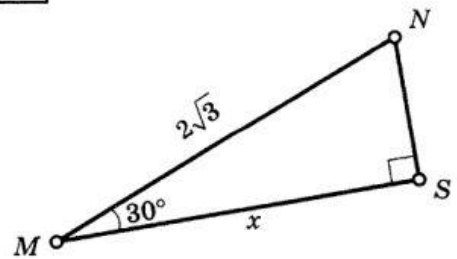

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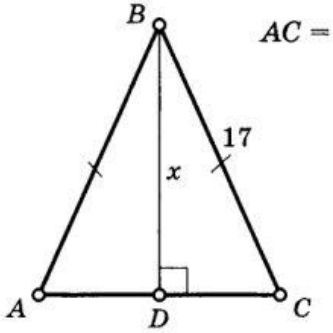
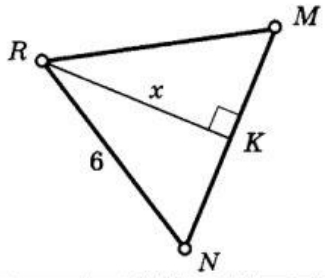


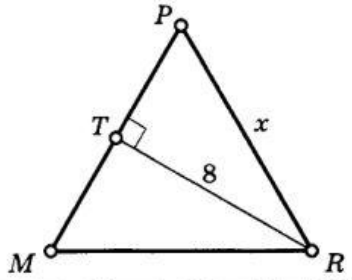
6

ΔRMN — правильный



7

ΔMPR — правильный



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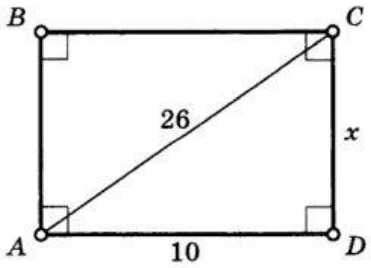
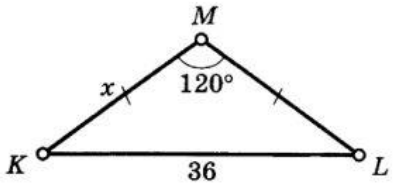


ТЕОРЕМА ПИФАГОРА

Найдите x.

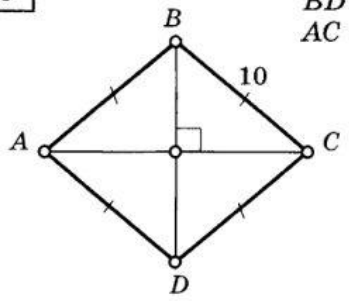
1 уровень

9



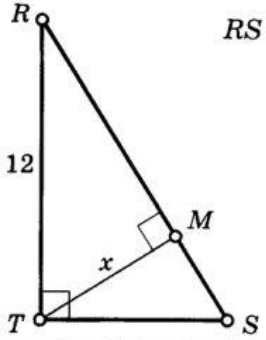
13

$BD = 12$
$AC = x$



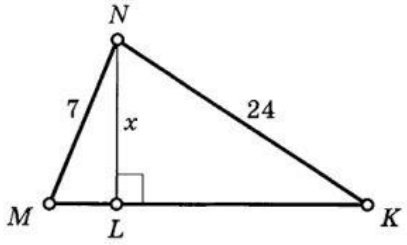
10

$RS = 13$



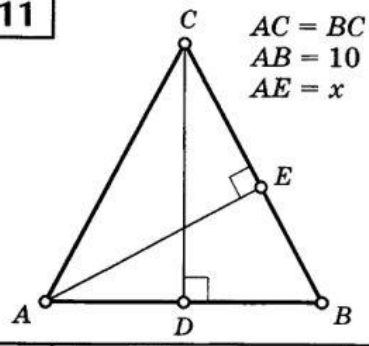
14

$MK = 25$



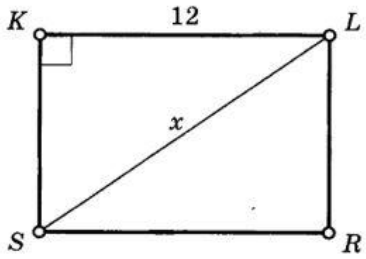
11

$AC = BC = 13$
$AB = 10$
$AE = x$



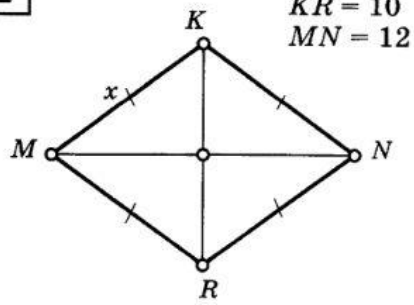
15

$SRLK$ — прямоугольник



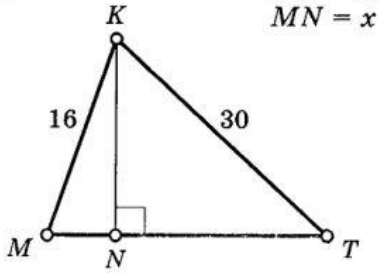
12

$KR = 10$
$MN = 12$



16

$MT = 34$
$MN = x$

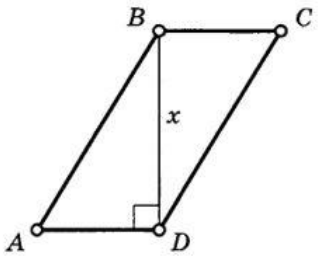


ТЕОРЕМА ПИФАГОРА

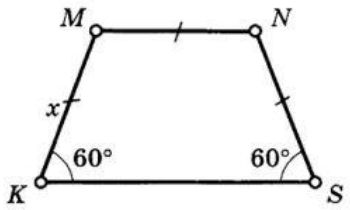
Найдите x.

2 уровень

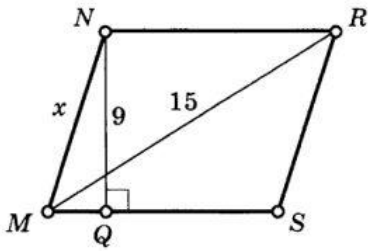
17 $AB - BC = 3 \quad P = 50$



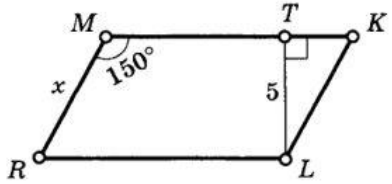
18 $S_{KMNS} = 96\sqrt{3}$



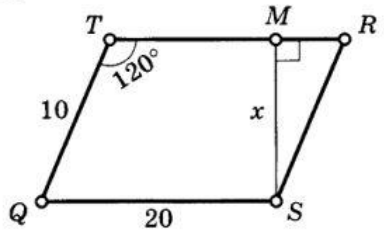
19 $S_{MNRS} = 99$



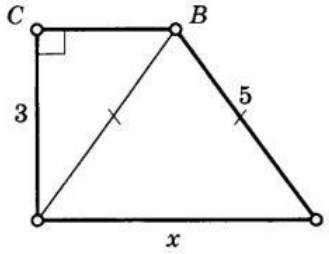
20 $RLKM$ — параллелограмм



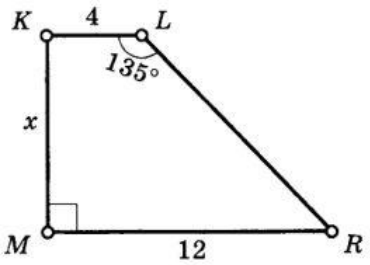
21



22 $ABCD$ — трапеция



23 $MKLR$ — трапеция



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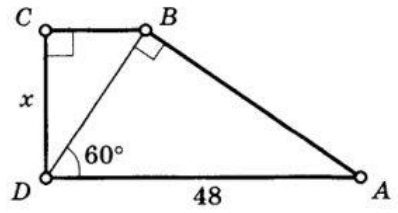
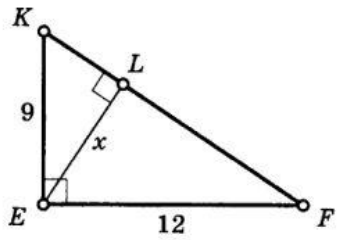


ТЕОРЕМА ПИФАГОРА

Найдите x.

2 уровень

25



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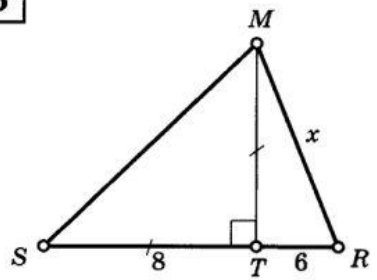
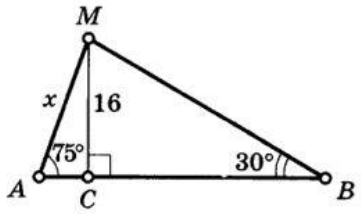
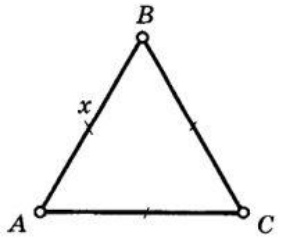


27



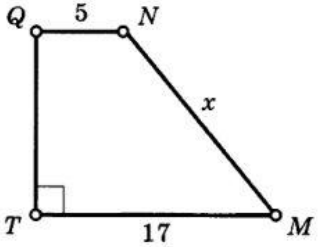
28



$S = 4\sqrt{3}$

29

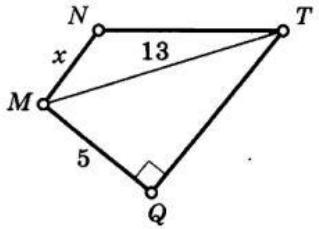
$S = 55$



30

$MNTQ$ — трапеция

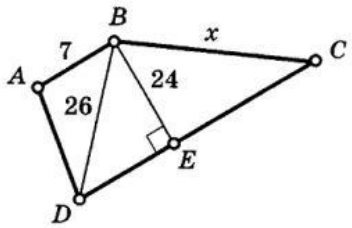
$S_{MNTQ} = 50$



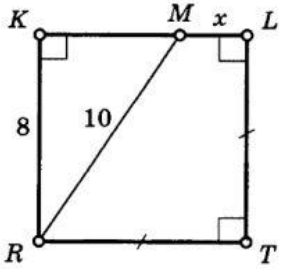
31

$ABCD$ — трапеция

$S_{ABCD} = 432$



32

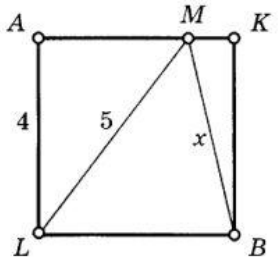


ТЕОРЕМА ПИФАГОРА

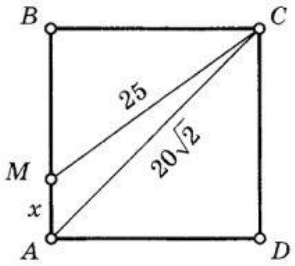
Найдите x.

3 уровень

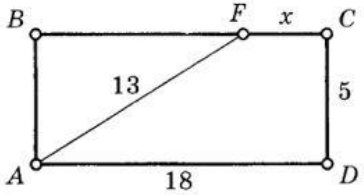
33 $AKBL$ — квадрат



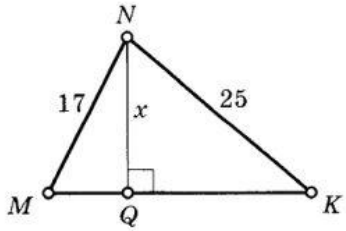
34 $ABCD$ — квадрат



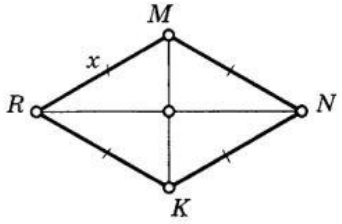
35 $ABCD$ — прямоугольник



36 $P_{\triangle MNK} = 70$

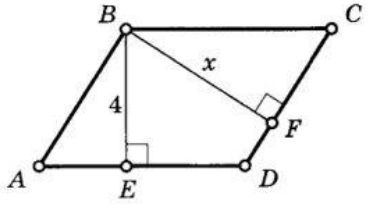


37 $RN - MK = 4$, $S_{RMNK} = 96$

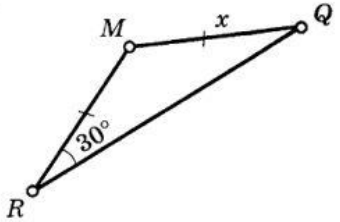


38 $ABCD$ — параллелограмм

$P_{ABCD} = 42$, $S_{ABCD} = \frac{140}{3}$

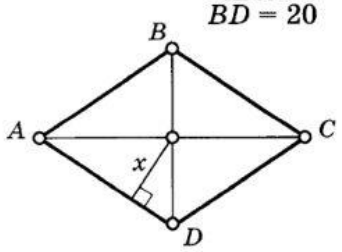


39



$S = 100\sqrt{3}$

40 $ABCD$ — ромб, $S_{ABCD} = 480$, $BD = 20$



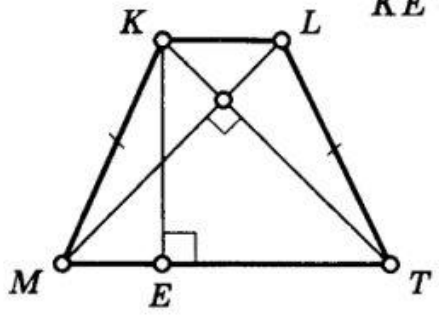
ТЕОРЕМА ПИФАГОРА

Найдите x.

3 уровень

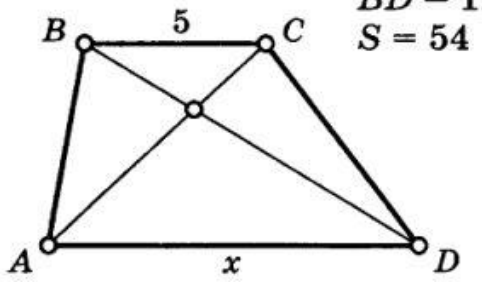
49

$MKLT$ — трапеция
$S = 81$
$KE = x$



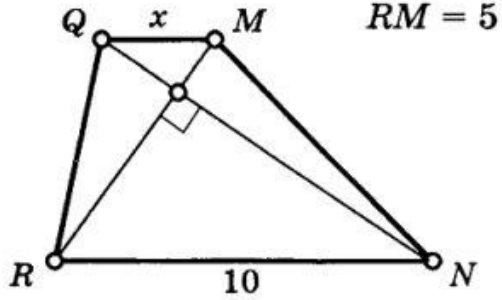
50

$ABCD$ — трапеция
$AC = 9$
$BD = 12$
$S = 54$



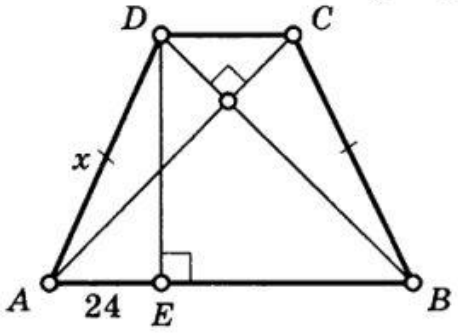
51

$RQMN$ — трапеция
$QN = 12$
$RM = 5$



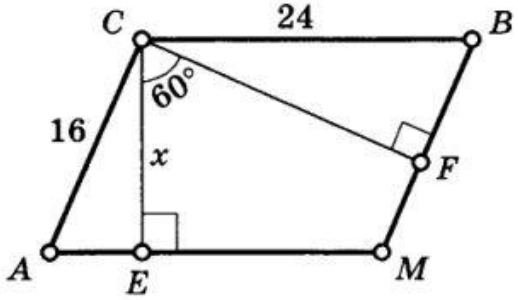
52

$ABCD$ — трапеция
$S = 100$



53

$ACBM$ — параллелограмм



54

$S_{ABCD} = 180$