Лебедева К. В.

Рабочая тетрадь для подготовки к ОГЭ

по математике

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*Нам понадобится:*

# СЮЖЕТ «ПЛАН МЕСТНОСТИ»

𝑆 = 𝑉 ∙ 𝑡 *– формула нахождения расстояния, где S – путь (расстояние), V – скорость, t – время. 1ч=60мин*

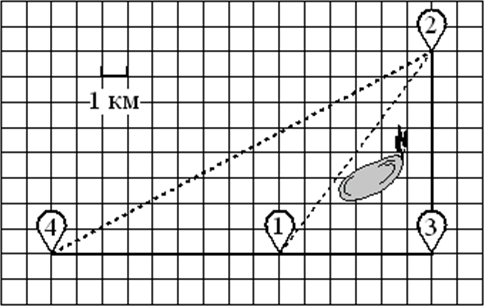
ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

Никита и папа летом живут в деревне Лягушкино. В субботу они собираются съездить на велосипедах в село Вятское в спортивный магазин. Из деревни Лягушкино в село Вятское можно проехать по прямой лесной дорожке. Есть более длинный путь: по прямолинейному шоссе через деревню Куровка до деревни Марусино, где нужно повернуть под прямым углом налево на другое шоссе, ведущее в село Вятское. Есть и третий маршрут: в деревне Куровка можно свернуть на прямую тропинку в село Вятское, которая идёт мимо пруда. Лесная дорожка и тропинка образуют с шоссе прямоугольные треугольники.

По шоссе Никита с папой едут со скоростью 25 км/ч, а по лесной дорожке и тропинке

* со скоростью 15 км/ч.

На плане изображено взаимное расположение населённых пунктов, длина стороны каждой клетки равна 1 км.

* 1. Пользуясь описанием, определите, какими цифрами на плане обозначены населённые пункты.

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| Насел.  Пункты | д.  Лягушкино | с.  Вятское | д.  Куровка |
| Цифры |  |  |  |

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Ответ:

* 1. Сколько километров проедут Никита с папой от деревни Лягушкино до села Вятское, если они поедут по шоссе через деревню Марусино?

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Ответ:

* 1. Найдите расстояние от деревни Лягушкино до села Вятское по прямой. Ответ дайте в километрах.

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* 1. Сколько минут затратят на дорогу из деревни Лягушкино в село Вятское Никита с папой, если поедут через деревню Марусино?

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Ответ:

* 1. В таблице указана стоимость (в рублях) некоторых продуктов в четырёх магазинах, расположенных в деревне Лягушкино, селе Вятское, деревне Куровка и деревне Марусино.

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| Наименование  продукта | д. Лягушкино | с. Вятское | д. Куровка | д. Марусино |
| Молоко (1 л) | 32 | 38 | 31 | 44 |
| Хлеб (1 батон) | 26 | 28 | 35 | 25 |
| Сыр «Российский»  (1 кг) | 220 | 260 | 230 | 240 |
| Говядина (1 кг) | 360 | 350 | 330 | 400 |
| Картофель (1 кг) | 16 | 15 | 22 | 17 |

Никита с папой хотят купить 3 батона хлеба, 2 кг говядины и 3 кг картофеля. В каком магазине такой набор продуктов будет стоить дешевле всего? В ответ запишите стоимость данного набора в этом магазине.

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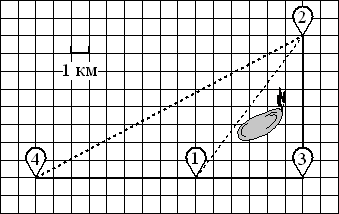
ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

Никита и папа летом живут в деревне Лягушкино. В субботу они собираются съездить на велосипедах в село Вятское в спортивный магазин. Из деревни Лягушкино в село Вятское можно проехать по прямой лесной дорожке. Есть более длинный путь: по прямолинейному шоссе через деревню Куровка до деревни Марусино, где нужно повернуть под прямым углом налево на другое шоссе, ведущее в село Вятское. Есть и третий маршрут: в деревне Куровка можно свернуть на прямую тропинку в село Вятское, которая идёт мимо пруда. Лесная дорожка и тропинка образуют с шоссе прямоугольные треугольники.

По шоссе Никита с папой едут со скоростью 25 км/ч, а по лесной дорожке и тропинке

* со скоростью 15 км/ч.

На плане изображено взаимное расположение населённых пунктов, длина стороны каждой клетки равна 1 км.

* 1. Пользуясь описанием, определите, какими цифрами на плане обозначены населённые пункты.

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| Насел.  Пункты | д.  Марусино | д.  Куровка | с.  Вятское |
| Цифры |  |  |  |

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Ответ:

* 1. Сколько километров проедут Никита с папой от деревни Куровка до села Вятское, если они поедут по шоссе через деревню Марусино?

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Ответ:

* 1. Найдите расстояние от деревни Куровка до села Вятское по прямой. Ответ дайте в километрах.

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* 1. Сколько минут затратят на дорогу из деревни Лягушкино в село Вятское Никита с папой, если они поедут по прямой лесной дорожке?

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Ответ:

* 1. В таблице указана стоимость (в рублях) некоторых продуктов в четырёх магазинах, расположенных в деревне Лягушкино, селе Вятское, деревне Куровка и деревне Марусино.

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| Наименование  продукта | д. Лягушкино | с. Вятское | д. Куровка | д. Марусино |
| Молоко (1 л) | 32 | 38 | 31 | 44 |
| Хлеб (1 батон) | 26 | 28 | 35 | 25 |
| Сыр «Российский»  (1 кг) | 220 | 260 | 230 | 240 |
| Говядина (1 кг) | 360 | 350 | 330 | 400 |
| Картофель (1 кг) | 16 | 15 | 22 | 17 |

Никита с папой хотят купить 6 л молока, 4 батона хлеба и 3 кг говядины. В каком магазине такой набор продуктов будет стоить дешевле всего?

В ответ запишите стоимость данного набора в этом магазине.

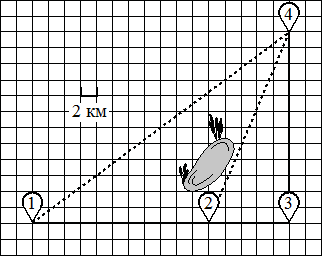
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Ответ:

ДОМАШНЯЯ РАБОТА

Полина летом отдыхает у дедушки в деревне Ясная. В четверг они собираются съездить на велосипедах в село Майское в магазин. Из деревни Ясная в село Майское можно проехать по прямой лесной дорожке. Есть более длинный путь: по прямолинейному шоссе через деревню Камышёвка до деревни Хомяково, где нужно повернуть под прямым углом налево на другое шоссе, ведущее в село Майское. Есть и третий маршрут: в деревне Камышёвка можно свернуть на прямую тропинку в село Майское, которая идёт мимо пруда. Лесная дорожка и тропинка образуют с шоссе прямоугольные треугольники.

По шоссе Полина с дедушкой едут со скоростью 20 км/ч, а по лесной дорожке и тропинке — со скоростью 15 км/ч. На плане изображено взаимное расположение населённых пунктов, длина стороны каждой клетки равна 2 км.

* + 1. Пользуясь описанием, определите, какими цифрами на плане обозначены населённые пункты.

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| Насел.  пункты | д.  Камышёвка | д. Ясная | д. Хомяково |
| Цифры |  |  |  |

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Ответ:

* + 1. Сколько километров проедут Полина с дедушкой от деревни Камышёвка до села Майское, если они поедут по шоссе через деревню Хомяково?

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Ответ:

* + 1. Найдите расстояние от деревни Камышёвка до села Майское по прямой. Ответ дайте в километрах.

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Ответ:

* + 1. Сколько минут затратят на дорогу из деревни Ясная в село Майское Полина с дедушкой, если они поедут сначала по шоссе, а затем свернут в Камышёвке на прямую тропинку, которая проходит мимо пруда?

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Ответ:

* + 1. В таблице указана стоимость (в рублях) некоторых продуктов в четырёх магазинах, расположенных в деревне Ясная, селе Майское, деревне Камышёвка и деревне Хомяково.

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| Наименование  продукта | д. Ясная | с. Майское | д. Камышёвка | д. Хомяково |
| Молоко (1 л) | 42 | 38 | 41 | 33 |
| Хлеб (1 батон) | 25 | 21 | 29 | 30 |
| Сыр «Российский»  (1 кг) | 310 | 320 | 290 | 280 |
| Говядина (1 кг) | 340 | 380 | 410 | 390 |
| Картофель (1 кг) | 15 | 20 | 17 | 18 |

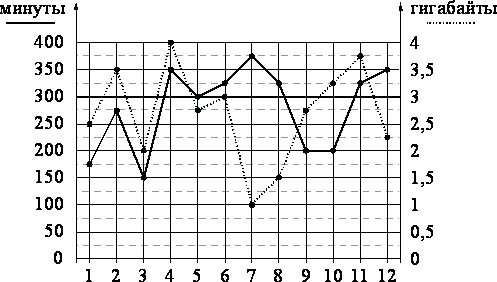
Полина с дедушкой хотят купить 2 л молока, 3 кг говядины и 2 кг картофеля. В каком магазине такой набор продуктов будет стоить дешевле всего? В ответ запишите стоимость данного набора в этом магазине.

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Ответ:

# СЮЖЕТ «ТАРИФНЫЙ ПЛАН»

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

На рисунке точками показано количество минут исходящих вызовов и трафик мобильного интернета в гигабайтах, израсходованных абонентом в процессе пользования смартфоном, за каждый месяц 2019 года. Для удобства точки, соответствующие минутам и гигабайтам, соединены сплошными и пунктирными линиями соответственно.

В течение года абонент пользовался тарифом «Стандартный», абонентская плата по которому составляла 350 рублей в месяц. При условии нахождения абонента на территории РФ в абонентскую плату тарифа «Стандартный» входит:

* пакет минут, включающий 300 минут исходящих вызовов на номера, зарегистрированные на территории РФ;
* пакет интернета, включающий 3 гигабайта мобильного интернета;
* пакет SMS, включающий 120 SMS в месяц;
* безлимитные бесплатные входящие вызовы.

Стоимость минут, интернета и SMS сверх пакета тарифа указана в таблице.

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| Исходящие вызовы | 3 руб./мин. |
| Мобильный интернет (пакет) | 90 руб. за 0,5 ГБ |
| SMS | 2 руб./шт. |

Абонент не пользовался услугами связи в роуминге. За весь год абонент отправил 110 SMS.

* 1. Определите, какие месяцы соответствуют указанному в таблице трафику мобильного интернета.

Заполните таблицу, в бланк ответов перенесите числа, соответствующие номерам месяцев, без пробелов, запятых и других дополнительных символов (например, для месяцев май, январь, ноябрь, август в ответ нужно записать число 51118).

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| Мобильный интернет | 1 ГБ | 3 ГБ | 3,25 ГБ | 1,5 ГБ |
| Номер месяца |  |  |  |  |

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Ответ:

* 1. Сколько рублей потратил абонент на услуги связи в июне?

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Ответ:

* 1. Сколько месяцев в 2019 году абонент не превышал лимит по пакету исходящих минут?

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Ответ:

* 1. На сколько процентов увеличился трафик мобильного интернета в феврале по сравнению с январём 2019 года?

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Ответ:

* 1. В конце 2019 года оператор связи предложил абоненту перейти на новый тариф, условия которого приведены в таблице.

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| Стоимость перехода на тариф | 0 руб. |
| Абонентская плата в месяц | 440 руб. |
| В абонентскую плату включены пакеты: | |
| пакет исходящих вызовов | 400 минут |
| пакет мобильного интернета | 4 ГБ |
| пакет SMS | 120 SMS |
| После расходования пакетов: | |
| входящие вызовы | 0 руб./мин. |
| исходящие вызовы\* | 4 руб./мин. |
| мобильный интернет (пакет) | 180 руб. за 0,5 ГБ |
| SMS | 2 руб./шт. |

*\*исходящие вызовы на номера, зарегистрированные на территории РФ*

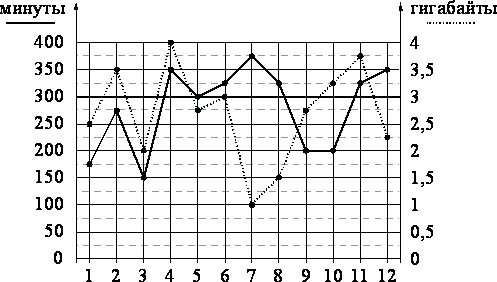
Абонент решает, перейти ли ему на новый тариф, посчитав, сколько бы он потратил на услуги связи за 2019 г., если бы пользовался им. Если получится меньше, чем он потратил фактически за 2019 г., то абонент примет решение сменить тариф.

Перейдёт ли абонент на новый тариф? В ответе запишите ежемесячную абонентскую плату по тарифу, который выберет абонент на 2020 год.

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Ответ:

ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

На рисунке точками показано количество минут исходящих вызовов и трафик мобильного интернета в гигабайтах, израсходованных абонентом в процессе пользования смартфоном, за каждый месяц 2019 года. Для удобства точки, соответствующие минутам и гигабайтам, соединены сплошными и пунктирными линиями соответственно.

В течение года абонент пользовался тарифом «Стандартный», абонентская плата по которому составляла 350 рублей в месяц. При условии нахождения абонента на территории РФ в абонентскую плату тарифа «Стандартный» входит:

* пакет минут, включающий 300 минут исходящих вызовов на номера, зарегистрированные на территории РФ;
* пакет интернета, включающий 3 гигабайта мобильного интернета;
* пакет SMS, включающий 120 SMS в месяц;
* безлимитные бесплатные входящие вызовы.

Стоимость минут, интернета и SMS сверх пакета тарифа указана в таблице.

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| Исходящие вызовы | 3 руб./мин. |
| Мобильный интернет (пакет) | 90 руб. за 0,5 ГБ |
| SMS | 2 руб./шт. |

Абонент не пользовался услугами связи в роуминге. За весь год абонент отправил 110 SMS.

* 1. Пользуясь рисунком, поставьте в соответствие каждому из указанных периодов времени характеристику израсходованных минут и гигабайтов.

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| Периоды | Характеристики |
| А) январь – февраль | 1) расход минут увеличился, а расход гигабайтов уменьшился |
| Б) февраль – март | 2) расход гигабайтов увеличился, а расход минут уменьшился |
| В) август – сентябрь | 3) расход минут увеличился и расход гигабайтов увеличился |
| Г) ноябрь – декабрь | 4) расход минут уменьшился и расход гигабайтов уменьшился |

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Ответ:

* 1. Сколько рублей потратил абонент на услуги связи в феврале?

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Ответ:

* 1. Сколько месяцев в 2019 году абонент не превышал лимит ни по пакету минут, ни по пакету мобильного интернета?

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Ответ:

* 1. На сколько процентов увеличилось количество минут исходящих вызовов в ноябре по сравнению с октябрём 2019 года?

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Ответ:

* 1. Абонент хочет приобрести новый смартфон. В трёх салонах сотовой связи этот смартфон продаётся в кредит (сначала делается первоначальный взнос, а потом ежемесячно в течение всего срока кредита вносятся платежи) на разных условиях. Условия приведены в таблице.

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| Салон | Стоимость  смартфона (руб.) | Первоначальный  взнос  (% от стоимости) | Срок кредита  (мес.) | Ежемесячный  платёж (руб.) |
| А | 17 000 | 25 | 12 | 1250 |
| Б | 16 600 | 30 | 12 | 1200 |
| В | 17 500 | 20 | 6 | 2600 |

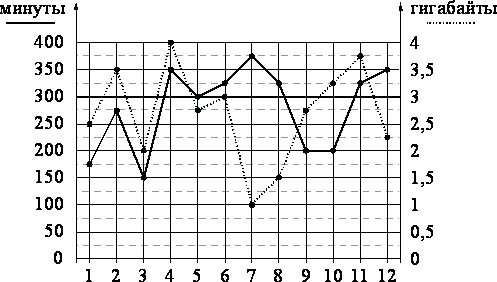
Определите, в каком из салонов покупка смартфона с учётом полностью выплаченного кредита обойдётся дешевле. В ответ запишите эту сумму в рублях.

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Ответ:

ДОМАШНЯЯ РАБОТА

На рисунке точками показано количество минут исходящих вызовов и трафик мобильного интернета в гигабайтах, израсходованных абонентом в процессе пользования смартфоном, за каждый месяц 2019 года. Для удобства точки, соответствующие минутам и гигабайтам, соединены сплошными и пунктирными линиями соответственно.



В течение года абонент пользовался тарифом «Стандартный», абонентская плата по которому составляла 350 рублей в месяц. При условии нахождения абонента на территории РФ в абонентскую плату тарифа «Стандартный» входит:

* пакет минут, включающий 300 минут исходящих вызовов на номера, зарегистрированные на территории РФ;
* пакет интернета, включающий 3 гигабайта мобильного интернета;
* пакет SMS, включающий 120 SMS в месяц;
* безлимитные бесплатные входящие вызовы.

Стоимость минут, интернета и SMS сверх пакета тарифа указана в таблице.

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| Исходящие вызовы | 3 руб./мин. |
| Мобильный интернет (пакет) | 90 руб. за 0,5 ГБ |
| SMS | 2 руб./шт. |

Абонент не пользовался услугами связи в роуминге. За весь год абонент отправил 110 SMS.

* 1. Пользуясь рисунком, поставьте в соответствие каждому из указанных периодов времени характеристику израсходованных минут и гигабайтов.

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| Периоды | Характеристики |
| А) февраль – март | 1) расход минут увеличился, а расход гигабайтов уменьшился |
| Б) май – июнь | 2) расход гигабайтов увеличился, а расход минут уменьшился |
| В) июнь – июль | 3) расход минут увеличился и расход гигабайтов увеличился |
| Г) август – сентябрь | 4) расход минут уменьшился и расход гигабайтов уменьшился |

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Ответ:

* 1. Сколько рублей потратил абонент на услуги связи в марте?

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Ответ:

* 1. Сколько месяцев в 2019 году расходы по тарифу составили ровно 350 рублей?

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* 1. Известно, что в 2018 году абонентская плата по тарифу «Стандартный» составляла 200 рублей. На сколько процентов выросла абонентская плата в 2019 году по сравнению с 2018 годом?

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Ответ:

* 1. Абонент хочет приобрести новый смартфон. В трёх салонах сотовой связи этот смартфон продаётся в кредит (сначала делается первоначальный взнос, а потом ежемесячно в течение всего срока кредита вносятся платежи) на разных условиях. Условия приведены в таблице.

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| Салон | Стоимость  смартфона (руб.) | Первоначальный  взнос  (% от стоимости) | Срок кредита  (мес.) | Ежемесячный  платёж (руб.) |
| А | 19 000 | 30 | 12 | 1300 |
| Б | 19 800 | 25 | 6 | 2800 |
| В | 18 500 | 20 | 12 | 1450 |

Определите, в каком из салонов покупка смартфона с учётом полностью выплаченного кредита обойдётся дешевле. В ответ запишите эту сумму в рублях.

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*Нам понадобится:*

# СЮЖЕТ «ЛИСТ БУМАГИ»

𝑆 = 𝑎 ∙ 𝑏 *– формула площади прямоугольника, где a – длина, b – ширина*

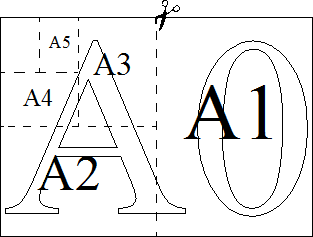
𝑎 = 𝑐 *– пропорция*

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𝑎𝑏 = 𝑐𝑑 *– основное свойство пропорции*

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

Общепринятые форматы листов бумаги обозначают буквой А и цифрой: А0, А1, А2 и так далее. Лист формата А0 имеет форму прямоугольника, площадь которого равна 1 кв. м. Если лист формата А0 разрезать пополам параллельно меньшей стороне, получается два равных листа формата А1. Если лист А1 разрезать так же пополам, получается два листа формата А2.И так далее.

Отношение большей стороны к меньшей стороне листа каждого формата одно и то же, поэтому листы всех форматов подобны. Это сделано специально для того, чтобы пропорции текста и его расположение на листе сохранялись при уменьшении или увеличении шрифта при изменении формата листа.

1. В таблице даны размеры (с точностью до мм) четырёх листов, имеющих форматы А0, А1, А3 и А4.

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| --- | --- | --- |
| Номер листа | Длина (мм) | Ширина (мм) |
| 1 | 297 | 210 |
| 2 | 420 | 297 |
| 3 | 1189 | 841 |
| 4 | 841 | 594 |

Установите соответствие между форматами и номерами листов. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр, соответствующих номерам листов, без пробелов, запятых и дополнительных символов.

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| А0 | А1 | А3 | А4 |
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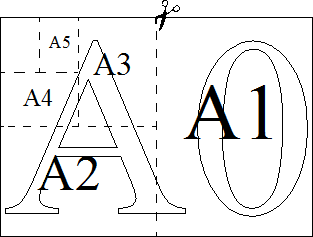
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Ответ:

1. Сколько листов формата А3 получится из одного листа формата А2?

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Ответ:

1. Найдите площадь листа формата А1. Ответ дайте в квадратных сантиметрах.

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Ответ:

1. Найдите длину листа бумаги формата А1. Ответ дайте в миллиметрах и округлите до ближайшего целого числа, кратного 10.

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Ответ:

1. Бумагу формата А5 упаковали в пачки по 500 листов. Найдите массу пачки, если масса бумаги площади 1 кв. м равна 80 г. Ответ дайте в граммах.

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Ответ:

ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

Общепринятые форматы листов бумаги обозначают буквой А и цифрой: А0, А1, А2 и так далее. Лист формата А0 имеет форму прямоугольника, площадь которого равна 1 кв. м. Если лист формата А0 разрезать пополам параллельно меньшей стороне, получается два равных листа формата А1. Если лист А1 разрезать так же пополам, получается два листа формата А2.И так далее.

Отношение большей стороны к меньшей стороне листа каждого формата одно и то же, поэтому листы всех форматов подобны. Это сделано специально для того, чтобы пропорции текста и его расположение на листе сохранялись при уменьшении или увеличении шрифта при изменении формата листа.

1. В таблице даны размеры (с точностью до мм) четырёх листов, имеющих форматы А0, А1, А3 и А4.

|  |  |  |
| --- | --- | --- |
| Номер листа | Длина (мм) | Ширина (мм) |
| 1 | 297 | 210 |
| 2 | 420 | 297 |
| 3 | 1189 | 841 |
| 4 | 841 | 594 |

Установите соответствие между форматами и номерами листов. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр, соответствующих номерам листов, без пробелов, запятых и дополнительных символов.

|  |  |  |  |
| --- | --- | --- | --- |
| А0 | А1 | А3 | А4 |
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Ответ:

1. Сколько листов формата А5 получится из одного листа формата А1?

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Ответ:

1. Найдите площадь листа формата А6. Ответ дайте в квадратных сантиметрах.

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Ответ:

1. Найдите отношение длины меньшей стороны листа формата А3 к большей. Ответ округлите до десятых.

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Ответ:

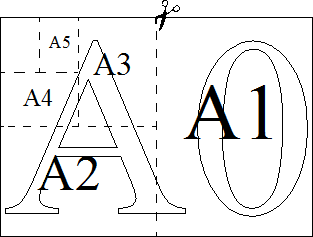
1. Размер (высота) типографского шрифта измеряется в пунктах. Один пункт равен 1/72 дюйма, то есть 0,3528 мм. Какой высоты нужен шрифт (в пунктах), чтобы текст был расположен на листе формата А3 так же, как этот же текст,

напечатанный шрифтом высотой 15 пунктов на листе формата А4? Размер шрифта округляется до целого.

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Ответ:

ДОМАШНЯЯ РАБОТА

Общепринятые форматы листов бумаги обозначают буквой А и цифрой: А0, А1, А2 и так далее. Лист формата А0 имеет форму прямоугольника, площадь которого равна 1 кв. м. Если лист формата А0 разрезать пополам параллельно меньшей стороне, получается два равных листа формата А1. Если лист А1 разрезать так же пополам, получается два листа формата А2.И так далее.

Отношение большей стороны к меньшей стороне листа каждого формата одно и то же, поэтому листы всех форматов подобны. Это сделано специально для того, чтобы пропорции текста и его расположение на листе сохранялись при уменьшении или увеличении шрифта при изменении формата листа.

1. В таблице даны размеры (с точностью до мм) четырёх листов, имеющих форматы А0, А1, А3 и А4.

|  |  |  |
| --- | --- | --- |
| Номер листа | Длина (мм) | Ширина (мм) |
| 1 | 841 | 594 |
| 2 | 420 | 297 |
| 3 | 594 | 420 |
| 4 | 297 | 210 |

Установите соответствие между форматами и номерами листов. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр, соответствующих номерам листов, без пробелов, запятых и дополнительных символов.

|  |  |  |  |
| --- | --- | --- | --- |
| А1 | А2 | А3 | А4 |
|  |  |  |  |

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Ответ:

1. Сколько листов формата А5 получится из одного листа формата А0?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Ответ:

1. Найдите площадь листа формата А4. Ответ дайте в квадратных сантиметрах.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Ответ:

1. Найдите длину листа бумаги формата А4. Ответ дайте в миллиметрах и округлите до ближайшего целого числа, кратного 10.

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Ответ:

1. Бумагу формата А3 упаковали в пачки по 250 листов. Найдите массу пачки, если масса бумаги площади 1 кв. м равна 120 г. Ответ дайте в граммах.

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Ответ:

*Нам понадобится:*

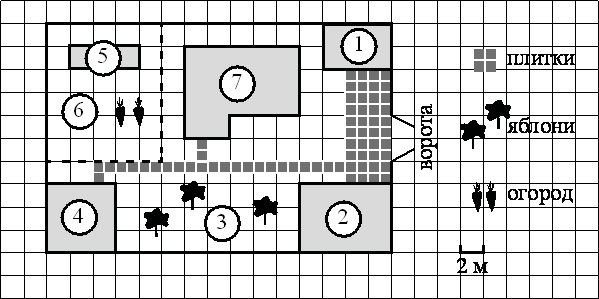
# СЮЖЕТ «ПЛАН УЧАСТКА»

кол − во уп. = 𝑆плитки *, где* 𝑆плитки = 𝑎 ∙ 𝑏*,* % = 𝑆строений

𝑆 1уп. 𝑆участка

𝑆 1уп. = 𝑆 1 плитки ∙ кол − во шт. в 1 уп. c2 = a2 + b2 – *теорема Пифагора*

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

На плане изображён дачный участок по адресу: п. Сосновка, ул. Зелёная, д. 19 (сторона каждой клетки на плане равна 2 м). Участок имеет прямоугольную форму. Выезд и въезд осуществляются через единственные ворота.

При входе на участок слева от ворот находится гараж. Справа от ворот находится сарай площадью 24 кв. м, а чуть подальше — жилой дом. Напротив жилого дома расположены яблоневые посадки. Также на участке есть баня, к которой ведёт дорожка, выложенная плиткой, и огород с теплицей внутри (огород отмечен на плане цифрой 6).

Все дорожки внутри участка имеют ширину 1 м и вымощены тротуарной плиткой размером 1 м×1 м. Между гаражом и сараем находится площадка, вымощенная такой же плиткой. К участку подведено электричество. Имеется магистральное газоснабжение.

1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр без пробелов, запятых и других символов.

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| Объекты | жилой дом | баня | гараж | теплица |
| Цифры |  |  |  |  |

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Ответ:

1. Плитки для садовых дорожек продаются в упаковках по 10 штук. Сколько упаковок плиток понадобилось, чтобы выложить все дорожки и площадку между сараем и гаражом?

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1. Найдите расстояние от жилого дома до гаража (расстояние между двумя ближайшими точками по прямой) в метрах.

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Ответ:

1. Сколько процентов от площади всего участка занимают строения (жилой дом, гараж, сарай, баня)? Ответ округлите до целого.

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Ответ:

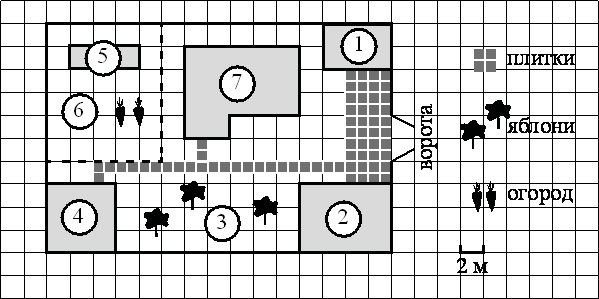
1. Хозяин участка планирует установить в жилом доме систему отопления. Он рассматривает два варианта: электрическое или газовое отопление. Цены на оборудование и стоимость его установки, данные о расходе газа, электроэнергии и их стоимости даны в таблице.

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|  | Нагреватель (котёл) | Прочее оборудование и монтаж | Средн. расход газа/ средн. потребл.  мощность | Стоимость  газа/электроэнергии |
| Газовое отопление | 20 000 руб. | 15 370 руб. | 1,6 куб. м/ч | 4,9 руб./куб. м |
| Электр. отопление | 15 000 руб. | 14 000 руб. | 4,9 кВт | 4,2 руб./( кВт⋅ч ) |

Обдумав оба варианта, хозяин решил установить газовое отопление. Через сколько часов непрерывной работы отопления экономия от использования газа вместо электричества компенсирует разницу в стоимости покупки и установки газового и электрического оборудования?

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ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

На плане изображён дачный участок по адресу: п. Сосновка, ул. Зелёная, д. 19 (сторона каждой клетки на плане равна 2 м). Участок имеет прямоугольную форму. Выезд и въезд осуществляются через единственные ворота.

При входе на участок слева от ворот находится гараж. Справа от ворот находится сарай площадью 24 кв. м, а чуть подальше — жилой дом. Напротив жилого дома расположены яблоневые посадки. Также на участке есть баня, к которой ведёт дорожка, выложенная плиткой, и огород с теплицей внутри (огород отмечен на плане цифрой 6).

Все дорожки внутри участка имеют ширину 1 м и вымощены тротуарной плиткой размером 1 м×1 м. Между гаражом и сараем находится площадка, вымощенная такой же плиткой.

К участку подведено электричество. Имеется магистральное газоснабжение.

* 1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр без пробелов, запятых и других символов.

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| Объекты | яблони | теплица | сарай | жилой дом |
| Цифры |  |  |  |  |

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Ответ:

* 1. Плитки для садовых дорожек продаются в упаковках по 8 штук. Сколько упаковок плиток понадобилось, чтобы выложить все дорожки и площадку между сараем и гаражом?

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Ответ:

* 1. Найдите расстояние от жилого дома до сарая (расстояние между двумя ближайшими точками по прямой) в метрах.

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Ответ:

* 1. На сколько процентов площадь, которую занимает баня, меньше площади, которую занимает гараж?

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Ответ:

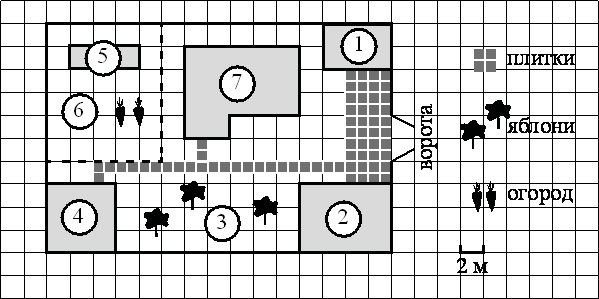
* 1. Хозяин участка решил покрасить весь забор вокруг участка (только с внешней стороны) в зелёный цвет. Площадь забора равна 232 кв. м, а купить краску можно в одном из двух ближайших магазинов. Цена и характеристика краски и стоимость доставки заказа даны в таблице.

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| Номер  магазина | Расход  краски | Масса краски в  одной банке | Стоимость одной  банки краски | Стоимость доставки  заказа |
| 1 | 0,6 кг/кв. м | 5 кг | 2400 руб. | 400 руб. |
| 2 | 0,4 кг/кв. м | 4 кг | 2300 руб. | 600 руб. |

Во сколько рублей обойдётся наиболее дешёвый вариант покупки с доставкой?

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Ответ:

ДОМАШНЯЯ РАБОТА

На плане изображён дачный участок по адресу: п. Сосновка, ул. Зелёная, д. 19 (сторона

каждой клетки на плане равна 2 м). Участок имеет

прямоугольную форму. Выезд и въезд осуществляются через

единственные ворота.

При входе на участок слева от ворот находится гараж. Справа от

ворот находится сарай площадью 24 кв. м, а чуть подальше — жилой дом. Напротив жилого дома расположены яблоневые посадки. Также на участке есть баня, к которой ведёт дорожка, выложенная плиткой, и огород с теплицей внутри (огород отмечен на плане цифрой 6).

Все дорожки внутри участка имеют ширину 1 м и вымощены тротуарной плиткой размером 1 м×1 м. Между гаражом и сараем находится площадка, вымощенная такой же плиткой.

К участку подведено электричество. Имеется магистральное газоснабжение.

* + 1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк ответов перенесите последовательность четырёх цифр без пробелов, запятых и других символов.

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| Объекты | жилой дом | яблони | теплица | сарай |
| Цифры |  |  |  |  |

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Ответ:

* + 1. Плитки для садовых дорожек продаются в упаковках по 6 штук. Сколько упаковок плиток понадобилось, чтобы выложить все дорожки и площадку между сараем и гаражом?

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Ответ:

* + 1. Найдите расстояние от жилого дома до теплицы (расстояние между двумя ближайшими точками по прямой) в метрах.

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Ответ:

* + 1. Сколько процентов от площади всего огорода занимает теплица?

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Ответ:

* + 1. Хозяин участка планирует установить в жилом доме систему отопления. Он рассматривает два варианта: электрическое или газовое отопление. Цены на оборудование и стоимость его установки, данные о расходе газа, электроэнергии и их стоимости даны в таблице.

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|  | Нагреватель (котёл) | Прочее оборудование и монтаж | Средн. расход газа/ средн. потребл.  мощность | Стоимость  газа/электроэнергии |
| Газовое отопление | 23 000 руб. | 12 204 руб. | 1,6 куб. м/ч | 4,7 руб./куб. м |
| Электр. отопление | 19 000 руб. | 10 000 руб. | 4,7 кВт | 4,9 руб./( кВт⋅ч ) |

Обдумав оба варианта, хозяин решил установить газовое отопление. Через сколько часов непрерывной работы отопления экономия от использования газа вместо электричества компенсирует разницу в стоимости покупки и установки газового и электрического оборудования?

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Ответ:

*Нам понадобится:*

# СЮЖЕТ «ШИНЫ»

𝐷 = 2𝐻 + 𝑑*, где D – диаметр, Н – высота боковины, d – внутренний диаметр колеса в мм*

1

𝑅 =

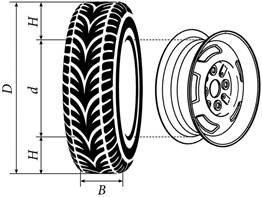
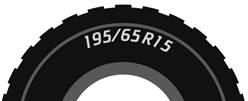
 𝐷*, где R – радиус*

2

𝐻 = первое число ∙второе число

100

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

Автомобильное колесо, как правило, представляет из себя металлический диск с установленной на него резиновой шиной. Диаметр диска совпадает с диаметром внутреннего отверстия в шине.

Для маркировки автомобильных шин применяется единая система обозначений. Например, 195/65 R15 (рис. 1). Первое число (число 195 в приведённом примере) обозначает ширину шины в миллиметрах (параметр *B* на рисунке 2). Второе число (число 65 в приведённом примере) — процентное отношение высоты боковины (параметр *H* на рисунке 2) к ширине шины, то есть 100 ∙ Н.

В

Последующая буква обозначает тип конструкции шины. В данном примере буква R

означает, что шина радиальная, то есть нити каркаса в боковине шины расположены вдоль радиусов колеса. На всех легковых автомобилях применяются шины радиальной конструкции.

За обозначением типа конструкции шины идёт число, указывающее диаметр диска колеса *d* в дюймах (в одном дюйме 25,4 мм). Таким образом, общий диаметр колеса *D* легко найти, зная диаметр диска и высоту боковины.

Возможны дополнительные маркировки, обозначающие допустимую нагрузку на шину, сезонность использования, тип дорожного покрытия и другие параметры.

Завод производит легковые автомобили определённой модели и устанавливает на них колёса с шинами маркировки 185/60 R14.

* + - 1. Завод допускает установку шин с другими маркировками. В таблице показаны разрешённые размеры шин.

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| Ширина шины (мм) | Диаметр диска (дюймы) | | |
| 14 | 15 | 16 |
| 185 | 185/60 | 185/55 | — |
| 195 | 195/55 | 195/55;195/50 | — |
| 205 |  | 205/50 | 205/50 |
| 215 | — | — | 215/45 |

Шины какой наименьшей ширины можно устанавливать на автомобиль, если диаметр диска равен 16 дюймам? Ответ дайте в миллиметрах.

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Ответ:

* + - 1. На сколько миллиметров радиус колеса с шиной маркировки 185/55 R15 меньше, чем радиус колеса с шиной маркировки 205/50 R15?

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Ответ:

* + - 1. На сколько миллиметров увеличится диаметр колеса, если заменить колёса, установленные на заводе, колёсами с шинами маркировки 195/55 R15?

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Ответ:

* + - 1. Найдите диаметр колеса автомобиля, выходящего с завода. Ответ дайте в миллиметрах.

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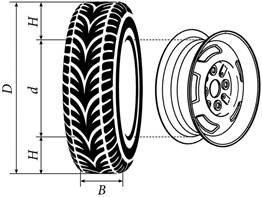
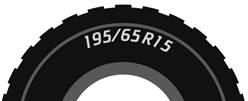
Ответ:

* + - 1. На сколько процентов увеличится пробег автомобиля при одном обороте колеса, если заменить колёса, установленные на заводе, колёсами с шинами маркировки 205/50 R16? Результат округлите до десятых.

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Ответ:

ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

Автомобильное колесо, как правило, представляет из себя металлический диск с установленной на него резиновой шиной. Диаметр диска совпадает с диаметром внутреннего отверстия в шине.

Для маркировки автомобильных шин применяется единая система обозначений. Например, 195/65 R15 (рис. 1). Первое число (число 195 в приведённом примере) обозначает ширину шины в миллиметрах (параметр *B* на рисунке 2). Второе число (число 65 в приведённом примере) — процентное отношение высоты боковины (параметр *H* на рисунке 2) к ширине шины, то есть 100 ∙ Н.

В

Последующая буква обозначает тип конструкции шины. В данном примере буква R

означает, что шина радиальная, то есть нити каркаса в боковине шины расположены вдоль радиусов колеса. На всех легковых автомобилях применяются шины радиальной конструкции.

За обозначением типа конструкции шины идёт число, указывающее диаметр диска колеса *d* в дюймах (в одном дюйме 25,4 мм). Таким образом, общий диаметр колеса *D* легко найти, зная диаметр диска и высоту боковины.

Возможны дополнительные маркировки, обозначающие допустимую нагрузку на шину, сезонность использования, тип дорожного покрытия и другие параметры.

Завод производит легковые автомобили определённой модели и устанавливает на них колёса с шинами маркировки 165/70 R13.

* + - * 1. Завод допускает установку шин с другими маркировками. В таблице показаны разрешённые размеры шин.

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| --- | --- | --- | --- |
| Ширина шины (мм) | Диаметр диска (дюймы) | | |
| 13 | 14 | 15 |
| 165 | 165/70 | 165/65 | — |
| 175 | 175/65 | 175/65; 175/60 | — |
| 185 | 185/65; 185/60 | 185/60 | 185/55 |
| 195 | 195/60 | 195/55 | 195/55; 195/50 |

Шины какой наименьшей ширины можно устанавливать на автомобиль, если диаметр диска равен 15 дюймам? Ответ дайте в миллиметрах

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Ответ:

* + - * 1. На сколько миллиметров радиус колеса с шиной маркировки 205/55 R14 больше, чем радиус колеса с шиной маркировки 165/65 R14?

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Ответ:

* + - * 1. На сколько миллиметров увеличится диаметр колеса, если заменить колёса, установленные на заводе, колёсами с шинами маркировки 195/50 R15?

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Ответ:

* + - * 1. Найдите диаметр колеса автомобиля, выходящего с завода. Ответ дайте в миллиметрах.

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Ответ:

* + - * 1. Дмитрий планирует заменить зимнюю резину на летнюю на своём автомобиле. Для каждого из четырёх колёс последовательно выполняются четыре операции:

снятие колеса, замена шины, балансировка колеса и установка колеса. Он выбирает между автосервисами А и Б. Затраты на дорогу и стоимость операций даны в

таблице.

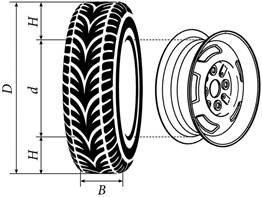
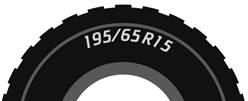
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| --- | --- | --- | --- | --- | --- |
| Автосервис | Суммарные | Стоимость для одного колеса | | | |
| затраты на  дорогу | Снятие колеса | Замена шины | Балансировка  колеса | Установка  колеса |
| А | 210 руб. | 60 руб. | 250 руб. | 200 руб. | 60 руб. |
| Б | 380 руб. | 55 руб. | 220 руб. | 180 руб. | 55 руб. |

Сколько рублей заплатит Дмитрий за замену резины на своём автомобиле, если выберет самый дешёвый вариант?

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Ответ:

ДОМАШНЯЯ РАБОТА

Автомобильное колесо, как правило, представляет из себя металлический диск с установленной на него резиновой шиной. Диаметр диска совпадает с диаметром внутреннего отверстия в шине.

Для маркировки автомобильных шин применяется единая система обозначений. Например, 195/65 R15 (рис. 1). Первое число (число 195 в приведённом примере) обозначает ширину шины в миллиметрах (параметр *B* на рисунке 2). Второе число (число 65 в приведённом примере) — процентное отношение высоты боковины (параметр *H* на рисунке 2) к ширине шины, то есть 100 ∙ Н.

В

Последующая буква обозначает тип конструкции шины. В данном примере буква R

означает, что шина радиальная, то есть нити каркаса в боковине шины расположены вдоль радиусов колеса. На всех легковых автомобилях применяются шины радиальной конструкции.

За обозначением типа конструкции шины идёт число, указывающее диаметр диска колеса *d* в дюймах (в одном дюйме 25,4 мм). Таким образом, общий диаметр колеса *D* легко найти, зная диаметр диска и высоту боковины.

Возможны дополнительные маркировки, обозначающие допустимую нагрузку на шину, сезонность использования, тип дорожного покрытия и другие параметры.

Завод производит легковые автомобили определённой модели и устанавливает на них колёса с шинами маркировки 215/65 R16.

Завод допускает установку шин с другими маркировками. В таблице показаны разрешённые размеры шин.

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| Ширина шины (мм) | Диаметр диска (дюймы) | | |
| 16 | 17 | 18 |
| 215 | 215/65 | 215/60 | — |
| 225 | 225/65; 225/60 | 225/55 | — |
| 235 | 235/60 | 235/55; 235/50 | 235/50 |

Шины какой наименьшей ширины можно устанавливать на автомобиль, если диаметр диска равен 17 дюймам? Ответ дайте в миллиметрах.

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Ответ:

На сколько миллиметров радиус колеса с шиной маркировки 215/55 R17 меньше, чем радиус колеса с шиной маркировки 225/50 R17?

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Ответ:

На сколько миллиметров увеличится диаметр колеса, если заменить колёса, установленные на заводе, колёсами с шинами маркировки 235/50 R18?

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Ответ:

Найдите диаметр колеса автомобиля, выходящего с завода. Ответ дайте в миллиметрах.

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Ответ:

4. На сколько процентов увеличится пробег автомобиля при одном обороте колеса, если заменить колёса, установленные на заводе, колёсами с шинами маркировки 225/65 R16? Результат округлите до десятых.

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Нам понадобится:

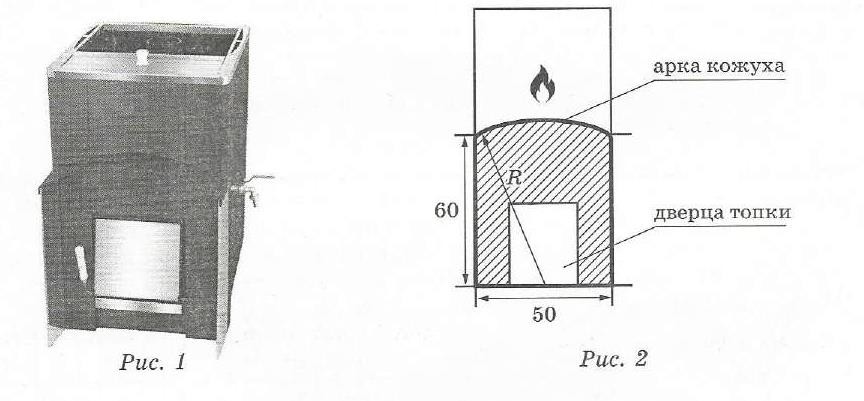
# СЮЖЕТ «ПЕЧИ»

𝑉 = 𝑎 ∙ 𝑏 ∙ 𝑐*, где V – объем, a – длина, b – ширина, c – высота.*

𝑆 = 𝑎 ∙ 𝑏 *– площадь.*

c2 = a2 + b2 – *теорема Пифагора*

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

Хозяин дачного участка строит баню с парным отделением. Парное отделение имеет размеры: длина 3,5 м, ширина 2,2 м, высота 2 м. Окон в парном отделении нет, для доступа внутрь планируется дверь шириной 60 см, высота дверного проёма 1,8 м. Для прогрева парного отделения

можно использовать электрическую или дровяную печь. В таблице представлены характеристики трёх печей.

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| Номер  печи | Тип | Объём помещения  (куб. м) | Масса  (кг) | Стоимость  (руб.) |
| 1 | дровяная | 8–12 | 40 | 18 000 |
| 2 | дровяная | 10–16 | 48 | 19 500 |
| 3 | электрическая | 9–15,5 | 15 | 15 000 |

Для установки дровяной печи дополнительных затрат не потребуется. Установка электрической печи потребует подведения специального кабеля, что обойдётся в 6500 руб.

1. Установите соответствие между массами и номерами печей.

Заполните таблицу, в бланк ответов перенесите последовательность трёх цифр без пробелов, запятых и других дополнительных символов

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| --- | --- | --- | --- |
| Масса (кг) | 15 | 40 | 48 |
| Номер печи |  |  |  |

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Ответ:

1. Найдите объём парного отделения строящейся бани. Ответ дайте в кубических метрах.

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1. Во сколько рублей обойдётся покупка дровяной печи, подходящей по объёму парного отделения, с доставкой, если доставка печи до дачного участка будет стоить 1400 рублей?

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Ответ:

1. Доставка любой печи из магазина до участка стоит 1000 рублей. При покупке печи стоимостью больше 19 000 рублей магазин делает скидку 5% на товар и 30% на доставку. Сколько рублей будет стоить покупка печи номер 2 с доставкой на этих условиях?

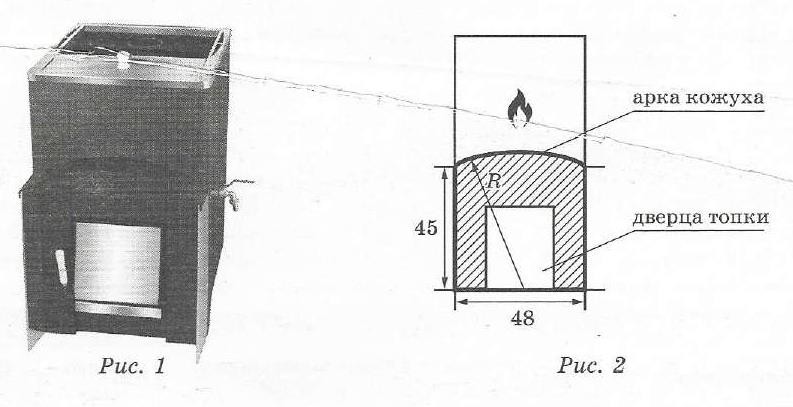
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Ответ:

1. Печь снабжена кожухом вокруг дверцы топки. Верхняя часть кожуха выполнена в виде арки, приваренной к передней стенке печки по дуге окружности с центром в середине нижней части кожуха (рис.2). Для установки печки хозяину потребовалось узнать радиус закругления арки R. Размеры кожуха в сантиметрах показаны на рисунке. Найдите радиус закругления арки в сантиметрах.

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ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

Хозяин дачного участка строит баню с парным отделением. Парное отделение имеет размеры: длина 3,5 м, ширина 2,2 м, высота 2 м. Окон в парном отделении нет, для доступа внутрь планируется дверь шириной 60 см, высота дверного проёма 1,8 м. Для прогрева парного отделения можно использовать

электрическую или дровяную печь. В таблице представлены характеристики трёх печей.

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| Номер  печи | Тип | Объём помещения  (куб. м) | Масса  (кг) | Стоимость  (руб.) |
| 1 | дровяная | 8–12 | 40 | 18 000 |
| 2 | дровяная | 10–16 | 48 | 19 500 |
| 3 | электрическая | 9–15,5 | 15 | 15 000 |

Для установки дровяной печи дополнительных затрат не потребуется. Установка электрической печи потребует подведения специального кабеля, что обойдётся в 6500 руб.

1. Установите соответствие между стоимостями и номерами печей.

Заполните таблицу, в бланк ответов перенесите последовательность трёх цифр без пробелов, запятых и других дополнительных символов.

|  |  |  |  |
| --- | --- | --- | --- |
| Стоимость (руб.) | 15 000 | 19 500 | 18 000 |
| Номер печи |  |  |  |

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Ответ:

1. Найдите суммарную площадь стен парного отделения строящейся бани (без площади двери). Ответ дайте в квадратных метрах.

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1. На сколько рублей покупка дровяной печи, подходящей по объёму парного отделения, обойдётся дешевле электрической с учётом установки?

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Ответ:

1. В прошлом году печи, указанные в таблице, стоили дороже. На них были сделаны скидки: на печь номер 1 скидка составила 10%, на печь номер 2 — 35%, на печь номер 3 — 25%. Сколько рублей стоила печь номер 1 в прошлом году?

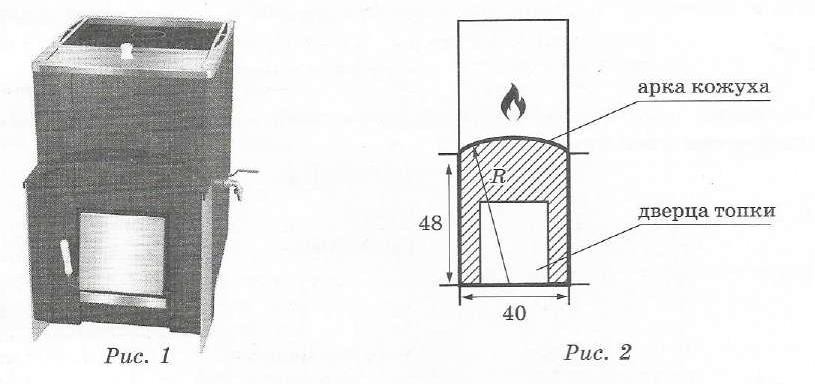
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Ответ:

1. Печь снабжена кожухом вокруг дверцы топки. Верхняя часть кожуха выполнена в виде арки, приваренной к передней стенке печки по дуге окружности с центром в середине нижней части кожуха (рис.2). Для установки печки хозяину потребовалось узнать радиус закругления арки R. Размеры кожуха в сантиметрах показаны на рисунке. Найдите радиус закругления арки в сантиметрах.

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ДОМАШНЯЯ РАБОТА

Хозяин дачного участка строит баню с парным отделением. Парное отделение имеет размеры: длина 3,5 м, ширина 2,2 м, высота 2 м. Окон в парном отделении нет, для доступа внутрь планируется дверь шириной 60 см, высота

дверного проёма 1,8 м. Для прогрева парного отделения можно использовать электрическую или дровяную печь. В таблице представлены характеристики трёх печей.

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| Номер  печи | Тип | Объём помещения  (куб. м) | Масса  (кг) | Стоимость  (руб.) |
| 1 | дровяная | 8–12 | 40 | 18 000 |
| 2 | дровяная | 10–16 | 48 | 19 500 |
| 3 | электрическая | 9–15,5 | 15 | 15 000 |

Для установки дровяной печи дополнительных затрат не потребуется. Установка электрической печи потребует подведения специального кабеля, что обойдётся в 6500 руб.

1. Установите соответствие между массами и номерами печей.

Заполните таблицу, в бланк ответов перенесите последовательность трёх цифр без пробелов, запятых и других дополнительных символов.

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|  | Объём (куб. м) | | | | | | | | | 12 | | | | | | 15,5 | | | | | | | | 16 | | | | | | | |  | | | | | | | | | | | |
|  | Номер печи | | | | | | | | |  | | | | | |  | | | | | | | |  | | | | | | | |
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Ответ:

1. Найдите площадь пола парного отделения строящейся бани. Ответ дайте в квадратных метрах.

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1. На сколько рублей покупка дровяной печи, подходящей по объёму парного отделения, обойдётся дороже электрической без учёта установки?

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Ответ:

1. На электрическую печь сделали скидку 15%. Сколько рублей стала стоить печь?

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Ответ:

1. Печь снабжена кожухом вокруг дверцы топки. Верхняя часть кожуха выполнена в виде арки, приваренной к передней стенке печки по дуге окружности с центром в середине нижней части кожуха (рис.2). Для установки печки хозяину потребовалось узнать радиус закругления арки R. Размеры кожуха в сантиметрах показаны на рисунке. Найдите радиус закругления арки в сантиметрах.

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# СЮЖЕТ «ПЛАН КВАРТИРЫ»

*Нам понадобится:*

кол − во уп. = 𝑆пола *, где* 𝑆пола = 𝑎 ∙ 𝑏*,* 𝑆 1уп. = 𝑆 1 плитки ∙ кол − во шт. в 1 уп.

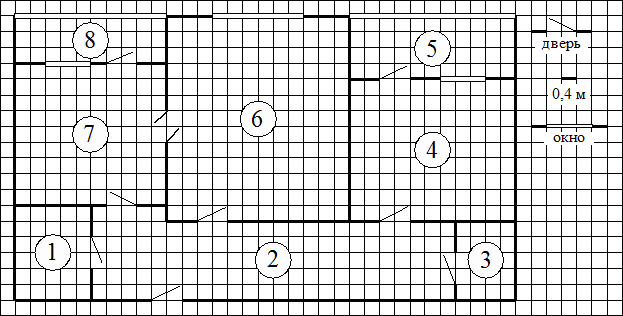
𝑆 1уп.

c2 = a2 + b2 – *теорема Пифагора*

% = 𝑆пола 1

𝑆пола 2

ЗАДАНИЕ ДЛЯ РАБОТЫ С УЧИТЕЛЕМ

На рисунке изображён план двухкомнатной квартиры в

многоэтажном жилом доме. Сторона одной клетки на плане соответствует 0,4 м, а условные обозначения двери и окна приведены в правой части рисунка.

Вход в квартиру находится в коридоре.

Слева от входа в квартиру находится санузел, а в противоположном конце коридора — дверь в кладовую. Рядом с кладовой находится спальня, из которой можно пройти на одну из застеклённых лоджий. Самое большое по площади помещение — гостиная, откуда можно попасть в коридор и на кухню. Из кухни также можно попасть на застеклённую лоджию.

1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк перенесите

последовательность четырёх цифр без пробелов, запятых и других дополнительных символов.

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|  | Объекты | | | | | | | коридор | | | | | | кладовая | | | | | | | спальня | | | | | | гостиная | | | | | | |  | | | | | | | |
|  | Цифры | | | | | | |  | | | | | |  | | | | | | |  | | | | | |  | | | | | | |
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Ответ:

1. Плитка продается в упаковках по 6 штук и имеет размеры 20×20 см. Сколько упаковок плитки нужно купить, чтобы выложить пол в санузле.

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1. Найдите площадь санузла. Ответ дайте в квадратных метрах.

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Ответ:

1. На сколько процентов площадь коридора больше площади кладовой?

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Ответ:

1. В квартире планируется установить стиральную машину. Характеристики стиральных машин, условия подключения и доставки приведены в таблице. Планируется купить стиральную машину с вертикальной загрузкой,

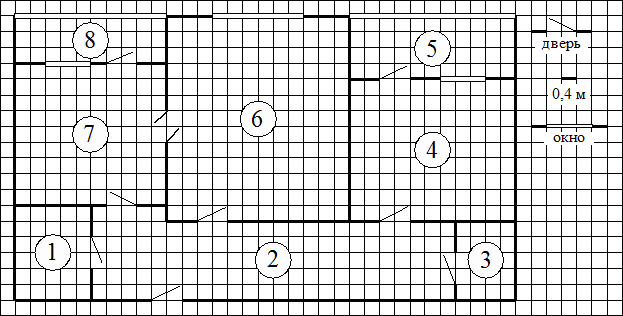
не превосходящую 85 см по высоте.

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| Мо- дель | Вмести- мость барабана (кг) | Тип загрузки | Стоимость (руб.) | Стоимость подклю- чения (руб.) | Стоимость доставки (% от стоимости  машины) | Габариты  (высота × ширина × глубина, см) |
| А | 7 | верт. | 28 000 | 1700 | бесплатно | 85×60×45 |
| Б | 5 | фронт. | 24 000 | 4500 | 10 | 85×60×40 |
| В | 5 | фронт. | 25 000 | 5000 | 10 | 85×60×40 |
| Г | 6,5 | фронт. | 24 000 | 4500 | 10 | 85×60×44 |
| Д | 6 | фронт. | 28 000 | 1700 | бесплатно | 85×60×45 |
| Е | 6 | верт. | 27 600 | 2300 | бесплатно | 89×60×40 |
| Ж | 6 | верт. | 27 585 | 1900 | 10 | 89×60×40 |
| З | 6 | фронт. | 20 000 | 6300 | 15 | 85×60×42 |
| И | 5 | фронт. | 27 000 | 1800 | бесплатно | 85×60×40 |
| К | 5 | верт. | 27 000 | 1800 | бесплатно | 85×60×40 |

Сколько рублей будет стоить наиболее дешёвый подходящий вариант вместе с подключением и доставкой?

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ЗАДАНИЕ ДЛЯ САМОСТОЯТЕЛЬНОЙ РАБОТЫ

На рисунке изображён план двухкомнатной квартиры в

многоэтажном жилом доме. Сторона одной клетки на плане соответствует 0,4 м, а условные обозначения двери и окна приведены в правой части рисунка.

Вход в квартиру находится в коридоре.

Слева от входа в квартиру находится санузел, а в противоположном конце коридора — дверь в кладовую. Рядом с кладовой находится спальня, из которой можно пройти на одну из застеклённых лоджий. Самое большое по площади помещение — гостиная, откуда можно попасть в коридор и на кухню. Из кухни также можно попасть на застеклённую лоджию.

1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк перенесите

последовательность четырёх цифр без пробелов, запятых и других дополнительных символов.

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|  | Объекты | | | | | | | гостиная | | | | | | санузел | | | | | | | кухня | | | | | | коридор | | | | | | |  | | | | | | | |
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Ответ:

1. Плитка продается в упаковках по 8 штук и имеет размеры 25×25 см. Сколько упаковок плитки нужно купить, чтобы выложить пол в санузле.

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Ответ:

1. Найдите площадь коридора. Ответ дайте в квадратных метрах.

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1. На сколько процентов площадь гостиной больше площади кладовой?

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Ответ:

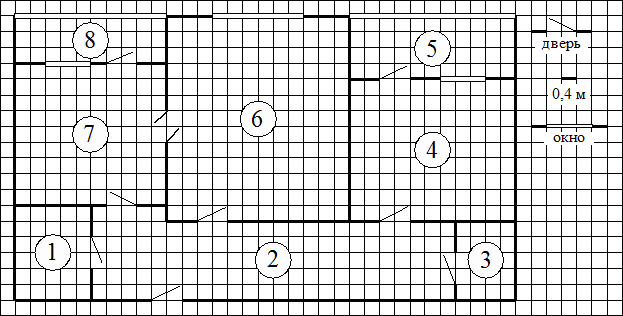
1. В квартире планируется подключить интернет. Предполагается, что трафик составит 1000 Мб в месяц, и исходя из этого выбирается наиболее дешёвый вариант. Интернет-провайдер предлагает три тарифных плана.

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| Тарифный план | Абонентская плата | Плата за трафик | |
| План «600» | 650 руб. за 600 Мб трафика в  месяц | 2 руб. за 1 Мб  сверх 600 Мб | |
| План «900» | 820 руб. за 900 Мб трафика в  месяц | 1,5 руб. за 1 Мб сверх  900 Мб | |
| План  «Безлимитный» | 950 руб. за неограниченное  количество Мб трафика |  |  |
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Сколько рублей нужно будет заплатить за интернет за месяц, если трафик действительно будет равен 1000 Мб?

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ДОМАШНЯЯ РАБОТА

На рисунке изображён план двухкомнатной квартиры в

многоэтажном жилом доме. Сторона одной клетки на плане соответствует 0,4 м, а условные обозначения двери и окна приведены в правой части рисунка. Вход в квартиру находится в коридоре.

Слева от входа в квартиру находится санузел, а в противоположном конце коридора — дверь в кладовую. Рядом с кладовой находится спальня, из которой можно пройти на одну из застеклённых лоджий. Самое большое по площади помещение — гостиная, откуда можно попасть в коридор и на кухню. Из кухни также можно попасть на застеклённую лоджию.

1. Для объектов, указанных в таблице, определите, какими цифрами они обозначены на плане. Заполните таблицу, в бланк перенесите

последовательность четырёх цифр без пробелов, запятых и других дополнительных символов.

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|  | Объекты | | | | | | | гостиная | | | | | | санузел | | | | | | | кухня | | | | | | коридор | | | | | | |  | | | | | | | |
|  | Цифры | | | | | | |  | | | | | |  | | | | | | |  | | | | | |  | | | | | | |
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Ответ:

1. Плитка продается в упаковках по 7 штук и имеет размеры 10×20 см. Сколько упаковок плитки нужно купить, чтобы выложить пол в санузле.

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Ответ:

1. Найдите площадь спальни. Ответ дайте в квадратных метрах.

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1. На сколько процентов площадь кухни больше площади кладовой?

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Ответ:

1. В квартире планируется установить стиральную машину. Характеристики стиральных машин, условия подключения и доставки приведены в таблице.

Планируется купить стиральную машину с вертикальной загрузкой вместимостью не менее 6 кг.

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| Мо- дель | Вмести- мость барабана (кг) | Тип загрузки | Стоимость (руб.) | Стоимость подклю- чения (руб.) | Стоимость доставки (% от стоимости  машины) | Габариты  (высота × ширина × глубина, см) |
| А | 7 | верт. | 28 000 | 1700 | бесплатно | 85×60×45 |
| Б | 5 | фронт. | 24 000 | 4500 | 10 | 85×60×40 |
| В | 5 | фронт. | 25 000 | 5000 | 10 | 85×60×40 |
| Г | 6,5 | фронт. | 24 000 | 4500 | 10 | 85×60×44 |
| Д | 6 | фронт. | 28 000 | 1700 | бесплатно | 85×60×45 |
| Е | 6 | верт. | 27 600 | 2300 | бесплатно | 89×60×40 |
| Ж | 6 | верт. | 27 585 | 1900 | 10 | 89×60×40 |
| З | 6 | фронт. | 20 000 | 6300 | 15 | 85×60×42 |
| И | 5 | фронт. | 27 000 | 1800 | бесплатно | 85×60×40 |
| К | 5 | верт. | 27 000 | 1800 | бесплатно | 85×60×40 |

Сколько рублей будет стоить наиболее дешёвый подходящий вариант вместе с подключением и доставкой?

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