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| GED/HSE Class 23 |
| GED Practice Set 1 |
| 1-12 Study Edition |

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| Kevin Adams |

1. Match the following equations with their solutions.

1. We’ll solve every algebraic equation the same way, by *isolating* the variable. How do we get the by itself?

We can do *anything* we want to an equation, as long as we do it to both sides.

Operations come in pairs that *undo* each other.

A number in front of a variable means **multiply**.

We show division with a **fraction bar**.

2. (a) Sometimes, we won’t need to do any actual calculations. Instead, we’ll set up the problem.

Two numbers next to one another with parentheses means **multiplication**.

With decimals, we can leave off any zeros at the end.

**Questions 2-4 refer to the following menu.**

|  |  |
| --- | --- |
|  |  |
| Bacon and Egg |  $1.99 |
| Chorizo and Potato |  $1.99 |
| Bean and Bacon |  $1.99 |
| Migas |  $2.99 |
| Picadillo |  $2.99 |

2. Irene orders two Picadillo tacos and one Bacon and Egg taco. She adds cheese to the Bacon and Egg taco. Which expression could be used to represent the cost, before tax, of Irene’s order?

(a)

(b)

(c)

(d)

**Questions 2-4 refer to the following menu.**

3. (c) When we calculate with percentages, we always convert them to either decimal or fraction form.

To convert into decimal form, move the point exactly 2 spaces to the left. Add in any necessary 0s as “place-holders.”

4. (c) We first need to find the total (see question 2.)

To find 8.25% of 8.47, we convert the percentage to decimal form and multiply:

Then we add that to our total:

A trick to finding a running total:

Instead of multiplying 8.47 by .0825, multiply by 1.0825:

5. (d) The formula for the area of a circle is on the formula sheet.

—“pi”--is a special number with its own key on the calculator. It behaves exactly like any other number.

Enter on the calculator:

To convert into decimal form, push the toggle key, found above the enter button.

|  |  |
| --- | --- |
|  |  |
| Bacon and Egg |  $1.99 |
| Chorizo and Potato |  $1.99 |
| Bean and Bacon |  $1.99 |
| Migas |  $2.99 |
| Picadillo |  $2.99 |

3. Sales tax on Irene’s order is 8.25%. What is the decimal form of 8.25%?

(a) 8.25 (b) 0.825 (c) 0.0825 (d) 0.00825

4. Irene orders two Picadillo tacos and one Bacon and Egg taco. She adds cheese to the Bacon and Egg taco. Sales tax is 8.25%. After tax, what is the total cost of Irene’s order? Round your answer to the nearest cent.

(a) $0.70

(b) $8.54

(c) $9.17

(d) $15.46

5. Rounded to the nearest tenth of a square inch, what is the area of a circle with a radius of 3 inches?

(a) 3.1

(b) 9.4

(c) 18.8

(d) 28.3

1. (c) According to the chart, the Erdogans spend 30% of their income on a mortgage.

First, convert 30% into decimal form:

Then multiply:

2. (b) Currently, the percentage for entertainment is 13, and the percentage for savings is 7.

We’ll move entertainment down and savings up until they’re the same:

They’ll both end up at 10%.

The easy way is to calculate the average:

**Questions 1 and 2 refer to the following pie chart.**

1. The Erdogan family has a monthly income of $5,600.00. How much do they spend on their mortgage?

(a) $30.00 (b) $168.00

(c) $1,680.00 (d) $3,000.00

2. The Erdogan family wants to change its spending habits. They would like for the amount they spend on entertainment to be the same as the amount they save, without changing anything else. What will be the new percentage for Entertainment?

(a) 7% (b) 10% (c) 13% (d) 20%

3. Which algebraic inequality represents the following?

3. (a) A **product** is the result of multiplication.

A **sum** is the result of addition.

We can use any letter to represent our number. The most common are and .

When we show multiplication with a variable, we put the number and the letter right next to each other. The number always comes first.

4. (c) **PEMDAS!**

Parentheses, Exponents and radicals, Multiplication and Division, Addition and Subtraction.

5. (b) Find the area of the rectangular room.

The **area** of a rectangle is

The **length**, , is

The **width**, , is

Divide by the number of square feet each box covers:

14 boxes won’t be enough, so Susan will need 15 whole boxes to get the job done.

*The product of a number and 3 is less than the sum of the same number and five.*

(a) (b)

(c) (d)

4. *Without a calculator*, evaluate the following expression.

(a) (b) (c) (d)

5. Susan is going to lay tile down in a rectangular room that is 18 feet long and 16 feet wide. The new tile that she is using is only available in boxes that cover 20 square feet each.

How many whole boxes of new tile will Susan need to buy in order to retile the entire room?

(a) 14

(b) 15

(c) 18

(d) 288

1. Evaluate

1. (9) We’re given an expression that contains variables, and then we’re told what the values of the variables are.

We’ll **substitute** the values into the expression. Where we see an , we’ll put a . Where we see a , we’ll put a .

If using a calculator, enter the value in parentheses *completely alone*. Put the exponent *outside* the parentheses.

Press enter, and

2. (c) is the number of hours spent on any job. Ernie’s charges 25 per hour,

 is the cost of materials for any job. Ernie’s charges one and a half times the cost of materials.

We add it all up, plus the $40 base fee.

3. (c) First, convert 17% into decimal form.

Then multiply

Our answer will be rounded to the *tenths* place. Look at the value immediately to the right of the tenths place. Is it 5 or more?

Yes, it’s 6.

Then the digit in the tenths place will *round up* to 8.

 if and . (Insert your answer into the box.)

2. Ernie’s Plumbing charges a base fee of $40.00 to make a house call. For any work done, they charge a rate of $25.00 per hour, plus one and a half times the cost of materials.

Which equation below represents the total cost, , of a plumbing job that takes hours and requires dollars worth of materials?

(a)

(b)

(c)

(d)

3. What is 17% of 728? (Round your answer to the nearest tenth.)

(a) 12.38

(b) 123.7

(c) 123.8

(d) 1238

4. (c) On the formula sheet, we’ll find the formula for finding simple interest.

 represents the **principal**: the amount we’re starting with, whether a loan or an investment.

 represents the interest **rate**. It will always be given to us as a percentage. We’ll need to convert it into decimal form.

 represents the **time** of the loan or investment. We must always be sure it is in *years*.

5. (c) **Multiples** of a number are found by multiplication by 1, 2, 3, 4, 5, and so on.

Some call this “skip counting.”

The Lowest Common Multiple of 2 or more numbers is the *lowest* multiple that each of our numbers has in common.

6, 12, 18, 24

9, 18

The lowest multiple that both 6 and 9 have in common is 18.

4. Dorothy takes out a 5 year loan for $14,000 at a simple interest rate of 4.5%.

Which of the following expressions represents the amount of interest Dorothy will pay over the life of the loan?

(a)

(b)

(c)

(d)

5. What is the Lowest Common Multiple of 6 and 9?

(a) 3

(b) 12

(c) 18

(d) 36

1. Using the symbols below, graph the inequality onto the number line.

1.

When a value can *equal* something, we put a full point on the number line.

When a value is *less than*  or *greater than* something, we use an empty point.

Starting from 0, locate , and mark it with an empty point.

The arrow indicates that can be anything larger than , but can’t touch itself.

2. (a) **PEMDAS!**

3. (b) The **factors** of a number are all of the numbers that can be multiplied together to produce it.

That is, the **factors** of a number are all of the values that divide evenly into it.

Think of them as coming in pairs.

The factors of 24 are:

The factors of 36 are:

The largest factor that the numbers have in common is 12.



2. *Without using a calculator*, evaluate this expression.

(a) 9

(b) 14

(c) 17

(d) 21

3. What is the greatest common factor of 24 and 36?

(a) 6

(b) 12

(c) 60

(d) 864

4. *Without using a calculator,* evaluate the following expression.

4. (c) When we set up our division problem, we notice that there’s a decimal *outside the box*.

We have to get rid of it: move the decimal point one space to the right both inside and outside the box.

The decimal point on the answer line will be directly above the decimal in the box.

 5

5. (b) We are looking for the **area** of this circle.

In order to calculate the area, we will need to know the **radius** of the circle: the distance from the center to the edge.

We have been given the **diameter** instead, the distance all the way across the circle.

The radius is half of the diameter.

If we know that , then we can see that the correct option is (b).

Otherwise, use the toggle button on the calculator.

(a)

(b)

(c)

(d)

5. A circular garden has a straight path going from one side, through the center, and all the way to the other side. The path is 20 feet long. To the nearest square foot, how large is the garden?

 20 feet

(a)

(b)

(c)

(d)

1. What is the value of in the following equation?

1. We are going to operate on this equation until we have completely by itself on the left side of the equal sign.

 first, we get rid of the

 Now we get rid of the

 “times 3.”

2. (b) To find a running total, we can use a trick.

First, convert the percentages into decimal form:

Now, instead of multiplying 32.5 by .0825, multiply by 1.0825. Then multiply the result by 1.18.

This can be entered in the calculator all at once:

Or

BUT DON’T CHOOSE OPTION (C)!

The question asks how much *each* of them paid, so we divide by 2.

3. (a) This one looks complex, but isn’t.

Adding and subtracting things is just normal as long as they’re the *same kind* of things.

Here, is our “thing.”

We’ve got 6 of them, and we subtract 4 of them, leaving us with 2 of them.

This is called **combining like terms**.

(a)

(b)

(c)

(d)

2. Joey and Annie met for a lunch date. The cost of their meal, before tax and tip, was . After sales tax was added, they left a tip of .

If Joey and Annie each paid for half the total cost of meal, tax, and tip, how much did each pay?

 (Round your answer to the nearest cent.)

(a)

(b)

(c)

(d)

3. *Without a calculator*, evaluate the following expression.

(a)

(b)

(c)

(d)

4. (b) This one is similar to the last.

The complex-looking expressions inside the parentheses are called **polynomials**.

Adding polynomials is simple: we pretend the parentheses aren’t there, and combine like terms.

With variables, like terms must be exactly the same: same letters and same exponents.

5. (a) First, set up this multiplication problem without the decimals:

And multiply like normal.

Now count the total number of places to the right of the decimal point in our original problem. There are 5.

There will also be 5 places to the right of the decimal point in our answer.

We often have to add one or more zeroes as place-holders.

4. Simplify the following polynomial.

(a)

(b)

(c)

(d)

5. *Without a calculator*, multiply

(a)

(b)

(c)

(d)

1. *Without using a calculator,* place a point on the number line below to represent the location of .



2. Arrange the following decimals in order from least to greatest.

(a)

(b)

(c)

(d)

3. What is the value of in the following equation? Enter your answer into the box provided.



1. The number line we’re given is divided into *tenths*, but our fraction is in *fifths*.

What **multiplier** do we use to turn *fifths* into *tenths*? 2.

2. (b) The easiest way to compare decimals is to line them up, keeping the decimals in one column. We can add zeroes to make the values more clear.

We can now see the correct option.

3. ()

Like all equations, our goal is to get the all alone on the left side of the equal sign.

Operations come in pairs. Each operation in a pair is the **inverse operation** of the other. **Inverse operations** *reverse* or “undo” each other.

We’re allowed to do *anything* we want to an equation, so long as we do it to both sides.

How do we undo a ? With a on both sides.

4. The Alcala family is ordering sod for a rectangular lawn they are having installed. The lawn is 90 feet long and 40 feet wide.

4. (d) Any time we’re dealing with the amount of *flat space* something takes up, we’re working with its **area**.

A giveaway is “square feet.” Area is always given in terms of *square* units.

Find the area of the rectangle:

Each pallet holds , so we divide:

5. (c) When we’re *adding* **polynomials**, pretend the parentheses aren’t there.

Then, combine like terms.

 The sod comes in pallets which hold 12 square feet of sod each.

 How many pallets of sod does the Alcala family need to order?

(a) 3

(b) 22

(c) 250

(d) 300

5. Add the following polynomials.

(a)

(b)

(c)

(d)

1. Insert the correct sign into this expression.

1. () To *add*, *subtract*, or *compare* fractions, we must have a **common denominator**.

Can we turn one of these denominators into the other by multiplication? Yes: . 2 is our multiplier.

2. (b) A **sum** is the result of addition.

A **difference** is the result of subtraction.

A **product** is the result of multiplication.

A **quotient** is the result of division.

We can use any letter to represent our number. The most common are and .

“The product of a number and four”

“is greater than or equal to”

“the sum of the same number and 2”

3. (b) We’ve been given an equation:

We’re told that represents the number of widgets a customer orders.

Here, .

Using the equation, we **substitute** a where we see .

When we see a number next to a variable, it means **multiplication**.

2. Choose the algebraic expression which represents the following description:

 *The product of a number and four is greater than or equal to the sum of the same number and two.*

(a)

(b)

(c)

(d)

3. ABC Widget Inc. sells custom widgets online. They use the following equation to calculate the total cost, , of an order for widgets:

If a customer orders 7 widgets, how much will the total cost of the order be?

(a) $27

(b) $68

(c) $87

(d) $92

4.

4.(b) Looking at the menu, we see that a large pizza costs $14.99. That’s our starting point.

Gary adds an additional topping for $1.99, so now we have

Sales tax is 8.25%. We need to convert it into decimal form:

To find the *running total*, including the price of the pizza *with the sales tax added in*, we multiply the cost of the pizza by 1.0825.

Finally, we tack on the $5 tip.

5. Our goal is to get the by itself on the left side of the equal sign.

We can do anything we want to equations, so long as we do it to both sides.

Inverse operations “undo” each other.

First, we need to get the term with the by itself. We undo the with a .

Now we undo “times 2” with “divided by 2”

|  |  |
| --- | --- |
|  |  |
| Small |  |
| Medium |  |
| Large |  |
| Extra Large |  |

 Gary ordered a large 2-topping pizza from Pietro’s Pizzeria. Sales tax was 8.25%, and he left 5 dollars as a tip.

 Which expression below can be used to represent the total cost of Gary’s purchase?

(a)

(b)

(c)

(d)

5. Find the value of in the following equation.

1. ABC Widget Manufacturing sells its world-famous, custom widgets direct to consumers.

1. (c) We’re given the equation used to determine the cost.

We’re told that represents the number of widgets a customer orders.

Here, the customer orders 4 widgets, so . Substitute 4 where we find an .

2. (d) When we encounter problems that involve different events happening in some cyclical way, and we’re asked when they’re going to “sync up,” we should recognize them as **Lowest Common Multiple** problems.

What is the **LCM** of 2 and 3?

6 is the **LCM** of 2 and 3. Every 6 hours, both the glazed and the Apple Fritters are going to be fresh.

Since Ashvin begins baking at 3:00, they will both be fresh exactly 6 hours later, at 9:00 AM.

3. (d) When we’re simplifying these kinds of fractions (**rational expressions**) that involve exponents, we subtract the exponent in the denominator from the exponent in the numerator.

We can visualize it like this:

After cancelling out factors, we’re left with

 It uses the formula

to determine the cost, , of an order for widgets.

 How much would ABC Widget Manufacturing charge a customer who ordered 4 widgets?

(a)

(b)

(c)

(d)

2. At Ashvin’s All Day Donut Shop, Ashvin begins baking every morning at 3:00 AM. Glazed Donuts are fresh every 2 hours, and Apple Fritters are fresh every 3 hours.

 If a customer wanted to purchase both a Glazed Donut and and Apple Fritter when they were both fresh, what is the earliest time the customer should arrive?

(a) 6:00 AM

(b) 7:00 AM

(c) 8:00 AM

(d) 9:00 AM

3. Evaluate the following expression.

(a) 2 (b) 4

(c) 6 (d) 8

4. Which equation represents the following description?

4. (b) The **product** of a number and 4 is

Two less than *that* is .

5. (a) We’ll need to use the formula for the **volume** of this cylinder.

The **diameter** of the cylinder is 20 feet.

The **radius** will be half of that, .

The **height** of the cylinder is 10 feet,

If we know that the first few digits of pi are 3.14, we can multiply by 1000 by moving the decimal 3 spaces to the right, and see that only option **a** is possible.

Otherwise, we use the toggle key on the calculator to move between and the decimal form.

**Important:** in a cylinder, the **height**, , is the distance between the two circles. If a cylinder is turned on its side, the height is *not* how tall it is!

 *Two less than the product of a number and*

 *four is equal to negative ten*.

(a)

(b)

(c)

(d)

5. A cylindrical water tank is 20 feet across and 10 feet high. To the nearest cubic foot, how much water can it hold?

 10

 20

(a)

(b)

(c)

(d)

 1. Without a calculator, multiply. Insert your answer into the box provided.

1. (0.072303) When multiplying with decimals, we set up the problem *ignoring* the decimals.

Now we count the *total* number of places to the right of the decimal in our original numbers. There are 6 places to the right of the decimal point.

Our answer will also have 6 places to the right of the decimal point. Add zeroes if necessary.

2. (a) **PEMDAS!**

3. (c) ABC uses the expression

To determine the cost. represents the number of widgets. Here, .

Substitute a 9 where we find an , and calculate.

Sam’s charges $9 each.

The difference of 84 and 81 is

2. Without a calculator, evaluate the following expression.

(a)

(b)

(c)

(d)

3. ABC Widget Manufacturing Co. uses the expression

to determine the cost of an order for widgets.

Sam’s Widget Makery charges a flat rate of $9.00 per widget.

What will be the difference in price between the two companies for an order of 9 widgets?

(a) $1.00

(b) $2.00

(c) $3.00

(d) $4.00

4. Sarai is going to be serving 5 gallons of punch at a Fourth of July celebration. She is planning on using conical paper cups, shown below.

4. (c) We’ll need to use the formula for the **volume** of a cone.

The **diameter**, , of this cone is 4.

The **radius**, , is half of that. .

The **height**, , is 6. .

The volume of each cup is 25.13 cubic inches.

She will need 5 gallons. Each gallon is 231 cubic inches.

We divide this by the volume of each cup.

Sarai will need 46 cups.

5. (b) When we are simplifying fractions or **rational expressions** that involve exponents, we subtract: *exponent in the numerator minus exponent in the denominator.*

What is the value of

 How many paper cups will Sarai need to serve all 5 gallons of punch?

 4 in

 6 in

(a) 10

(b) 25

(c) 46

(d) 454

5. Without a calculator, evaluate this expression.

(a)

(b)

(c)

(d)



1. At a 20%-Off-Everything sale, Jackie bought a new blouse and a new skirt. The original price of the blouse was $32.00, and the original price of the skirt was $28.00.

1. (b) First find the total cost *without* the 20% off.

We can find 20% of 60, and subtract that *from* 60.

We can also, without using a calculator, find 10% of 60:

and multiply by 2 to find 20%.

2. (b) Our goal is to get the completely alone on the left side of the equal sign.

First, we isolate the term *containing* . We need to get rid of, or undo, that .

Now, we get rid of the with a .

3. (b) Find the formula for the **volume** of a cylinder.

The **diameter**, , is 6.

The **radius**, , is half of that. .

The **height**, , is 11. .

 Before sales tax was added, what was the total cost of Jackie’s purchase?

(a) $12.00

(b) $48.00

(c) $60.00

(d) $72.00

2. What is the value of in the following equation?

(a)

(b)

(c)

(d)

3. What is the volume of the cylinder illustrated below?

 6

 11

(a)

(b)

(c)

(d)

4. Which algebraic inequality represents the following description?

4. (a) “The product of a number and three” is

Two more than *that* is

The sign for *is less than or equal to* is

“The sum of the same number and ten” is

5. (c) When we add **polynomials**, we pretend the parentheses aren’t there.

Then we combine like terms.

Remember the invisible one in front of !

6. (b) There are only two **undefined expressions** that will concern us: the square root of a negative number and a denominator/divisor of zero.

7. (b) The **absolute value** of a number is the distance of that number from zero. It is never negative.

*Two more than the product of a number and 3 is less than or equal to the sum of the same number and ten.*

(a)

(b)

(c)

(d)

5. Add.

(a)

(b)

(c)

(d)

6. Which of the following expressions is undefined in the set of real numbers?

(a)

(b)

(c)

(d)

7. Evaluate

(a) (b) (c) (d)

1. A plumber charges $90.00 to make a house call. For any work performed, he charges $40.00 per hour, plus one and a quarter times the cost of materials used.

1. (b) The plumber charges $40/hour. Hours are represented by .

 means “40 dollars times the number of hours.”

He also charges “one and a quarter times the cost of materials.”

“One and a quarter” is 1.25.

The cost of materials is .

We multiply 1.25 and .

He then adds $90.

2. (d) We’re not actually calculating, but showing the expression we could use.

First, add up the total before tax and tip.

Find the decimal forms of the percentages.

Remember, when we’re calculating a *running total*, we can add a 1 to our decimal, and multiply.

3. (b) The formula for the area of a rectangle is .

The **area** of the rectangle is .

The **width** is .

We are solving for the length, .

Which equation below could be used to represent the total cost, , of a plumbing job that takes hours to complete and uses dollars worth of materials?

(a)

(b)

(c)

(d)

|  |  |
| --- | --- |
|  |  |
| Meatloaf |  |
| Lasagna |  |
| Spaghetti |  |
| Rigatoni |  |

2.

***Add a drink and dessert for only $2.99!***

Jacob orders the Rigatoni Lunch Special, and adds a drink and dessert. Which expression below could be used to determine the cost of Jacob’s order after 8.25% sales tax and a 20% tip?

(a)

(b)

(c)

(d)

3. A rectangular strip of grass has an area of 600 square feet. It is 12 feet wide. How many feet long is the strip of grass?

(a) 5 (b) 50

(c) 500 (c) 552

4. Solve for .

4. ()

5. (c) The **mean** of a data set is its *average.*

We find the average by adding up all of the terms, and dividing that sum by the number of terms.

6. (d) There are only two **undefined expressions** we need to recognize:

any expression with a **denominator of zero**

and

**the square root of a negative number**.

 is a square root of a negative number.

7. (d)

8. (7) These lines represent the **absolute value** of a number. The **absolute value** is *how far the number is from zero.*

It is always a positive number.

9. We multiply a number by a **binomial** like this: simply multiply it by each term in the binomial. This is called **distribution**.

Pay attention to signs!

5. What is the mean of the following data set?

(a) 5 (b) 7

(c) 8 (d)16

6. Which of the following expressions is undefined in the set of real numbers?

(a) (b)

(c) (d)

7. Without a calculator, evaluate the following expression.

(a) 4 (b) 8

(c) 12 (d) 16

8.

9. Expand the following expression.

(a) (b)

(c) (d)

1. Evaluate this expression if and

1. (d) Where we see an , substitute a .

Where we find a , substitute a .

*Always put the value* *completely alone, all by itself, inside the parentheses*. The exponent goes *outside* the parentheses.

2. (c) The formula for the **area** of a circle is

The **radius** of this circle is .

If we know that the first few digits of pi are 3.14, we can see that the answer is going to be “a little more than 75,” or option c.

Otherwise, we use the toggle button on the calculator.

3. (c) To find the **median** value of a data set, we must first order them from least to greatest (smallest to largest.)

The **median** will be the *exact middle value*.

4.

(a)

(b)

(c)

(d)

2. Rounded to the nearest tenth, what is the area of a circle with a radius of 5?

(a) 31.4

(b) 62.8

(c) 78.5

(d) 314.2

3. What is the median value of the following data set?

(a)

(b)

(c)

(d)

4. Solve for .

5. Place a point on the number line to indicate the location of

5. This number line is divided into *tenths*.

We can turn our fraction into *tenths* by using a multiplier of 2.

6. (d) has a denominator of zero.

7. (d) When we are multiplying the same values with different exponents, we add up the exponents.

How many ’s are being multiplied? 3

How many ’s are being multiplied? 7

Remember the **invisible one**!

8. (d) This one is not as complicated as it looks. Remember: when we’ve got the *exact same things* (**like terms**), we add them and subtract them normally.

9. . We ignore the negative sign.

10. (a) **Factoring** is the opposite of **distributing**. We ask ourselves if our terms share a common factor. If so, we can *extract* it.

6 and 4 are both divisible by 2, so we can *extract* a factor of 2 from each term.

In this situation, we can **distribute** our answer choices and see which one gives us the expression in the problem.



6. Which of the following expressions is undefined in the set of real numbers?

(a) (b) (c) (d)

7. Without a calculator, simplify the following expression.

(a)

(b)

(c)

(d)

8. Without a calculator, simplify the following expression.

(a) (b)

(c) (d)

9.

10. Which expression below is the same as ?

(a)

(b)

(c)

(d)

1.1.

 2. a

 3. c

 4. c

 5. b

2.1. c

 2. b

 3. a

 4. c

 5. b

3.1. 9

 2. c

 3. c

 4. c

 5. c

4.1. 

 2. a

 3. b

 4. c

 5. b

5.1. c

 2. b

 3. a

 4. b

 5. a



6.1.

 2. b

 3.

 4. d

 5. c

7.1.

 2. b

 3. b

 4. d

 5. c

7.1.

 2. b

 3. b

 4. b

 5.

8.1. c

 2. d

 3. d

 4. b

 5. a

9.1.

 2. a

 3. c

 4. c

 5. a

10.1. b

 2. b

 3. b

 4. a

 5. c

 6. b

 7. b

11.1. b

 2. d

 3. b

 4.

 5. c

 6. d

 7. d

 8. 7

 9. d

12.1. d

 2. c

 3. c

 4.

 5.

 6. d

 7. d

 8. a

 9. 2

 10. a

13.1. b

 2. c

 3. 6

 4.

 5. d

 6. b

 7. a