4th Basic

5th Advanced

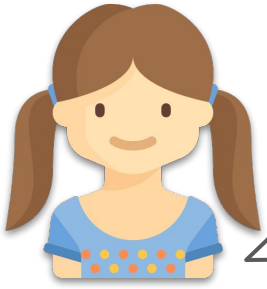
Helping With Math

USA GRADES

Writing Decimals in Expanded Form

Suitable for students
aged 8-10

This pack is suitable for learners aged 8-10 years old or 4th and 5th graders (USA). The content covers fact files and relevant basic and advanced activities involving writing decimals in expanded form.



Hi! I am Jackie. It's always raining that's why I can't go outside. Can you join me learn how to write decimals in expanded form instead?

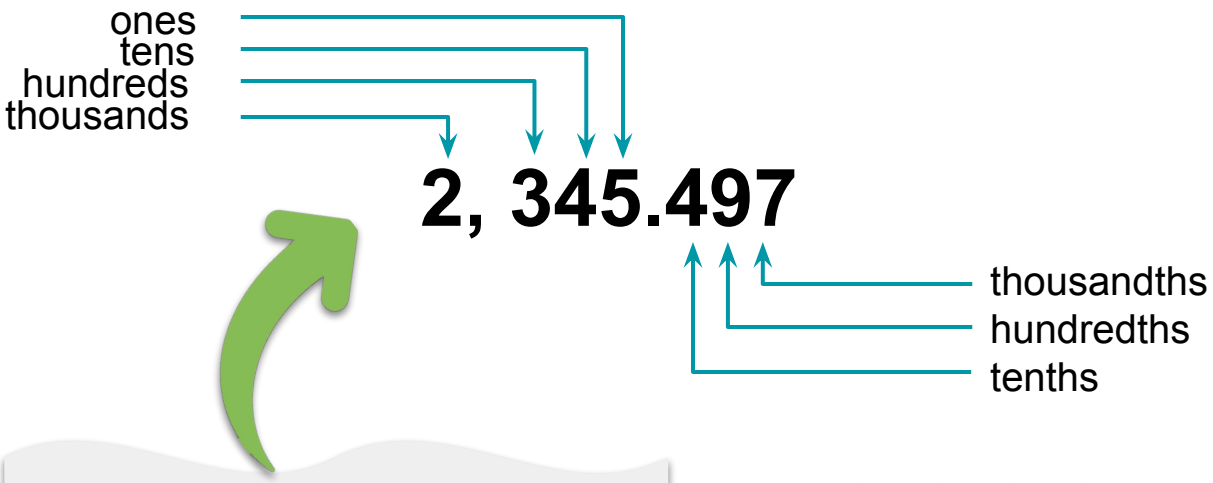
What is decimal?

Decimal is one way of writing numbers that have whole and fractional part. It contains a decimal point which separates the whole and fractional number.

EXPANDED FORM OF DECIMALS

A decimal has two parts; the whole number part and the decimal part called the mantissa. These parts are separated by a dot called decimal point. Below are the names given to a number depending on its position in the decimal.

The numbers at the left side of the decimal point begins with ones, tens, hundreds, thousands and so on. The numbers after the decimal point begins with tenths, hundredths, thousandths and so on.



The above example is in the standard form. How do we write it in its expanded form?

EXPANDED FORM OF DECIMALS

Example: Write 2345.497 in expanded form

2 3 4 5 . 4 9 7

2	thousands	2 x **1000**	2000
3	hundreds	3 x **100**	300
4	tens	4 x **10**	40
5	ones	5 x **1**	5
4	tenths	4 x **1/10**	0.4
9	hundredths	9 x **1/100**	0.09
7	thousandths	7 x **1/1000**	0.007

Therefore, the expanded form would be:
2000 + 300 + 40 + 5 + 0.4 + 0.09 + 0.007

LET'S PRACTICE!

1. 23.18

2.) 574.51

3.) 54.78

4.) 71.193

5.) 168.142

6.) 32.52

7.) 762.5

8.) 641.589

9.) 1.19

10.) 64.745

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PLAY THE MAZE

G4 Basic

Since you cannot go outside due to bad weather, try this maze challenge. Write the following decimals to expanded form. Write your answers on the space provided.

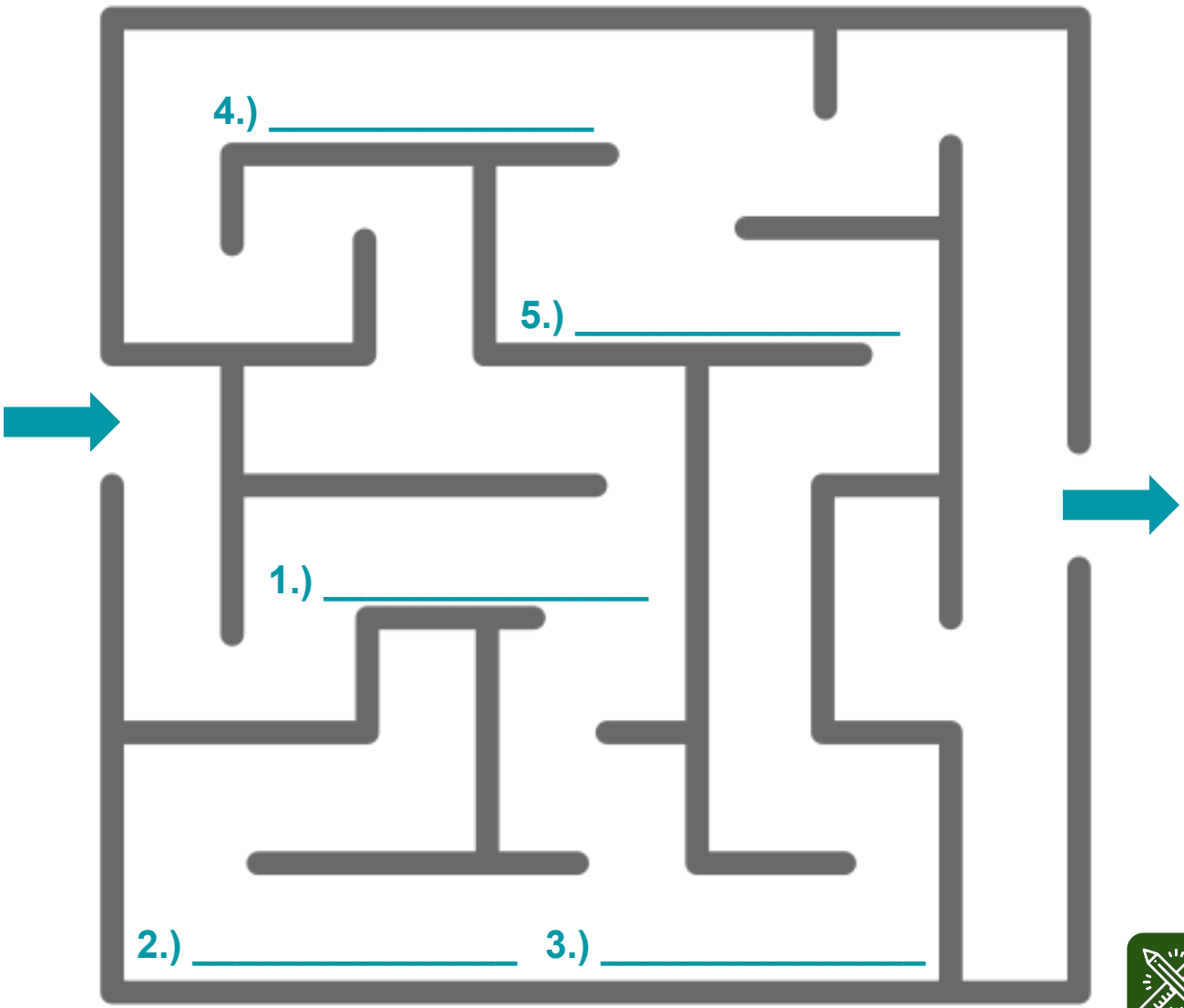
1.) 22.9

2.) 19.8

3.) 42.1

4.) 82.2

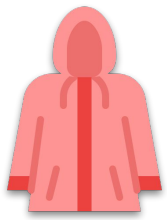
5.) 71.5



RAINY DAYS ESSENTIALS

G4 Basic

It's raining but you have to go outside to do grocery shopping. What are the possible things you need in order to protect you from the rain? Expand the following decimals and write the letter of your answer inside the box.

1.) 5.2	>		a.) 7 + 0.9	
2.) 4.8	>		b.) 5 + 0.2	
3.) 2.3	>		c.) 8 + 0.1	
4.) 7.9	>		d.) 4 + 0.8	
5.) 8.1	>		e.) 2 + 0.3	
6.) 6.3	>		f.) 9 + 0.4	
7.) 9.4	>		g.) 6 + 0.3	

MAKE RAIN ART

G4 Basic

Help me make some rain arts by answering the following. Write the following decimals in expanded form. Write your answers on the space provided.

1.) 42.8

2.) 34.1

3.) 75.9

4.) 18.7

5.) 35.4

6.) 41.2

LET'S MAKE SOUP

G4 Basic

Chicken soup is the best during rainy season. Help me gather the ingredients by writing the following decimals in expanded form. Write the letter of your answer inside the box.

1	321.4	»	4	518.5	»
2	452.8	»	5	689.4	»
3	764.3	»	6	184.9	»

a.) 400 + 50 + 2 + 0.8

b.) 600 + 80 + 9 + 0.4

c.) 300 + 20 + 1 + 0.4

d.) 700 + 60 + 4 + 0.3

e.) 100 + 80 + 4 + 0.9

f.) 500 + 10 + 8 + 0.5

COFFEE AND THE RAIN

G4 Basic

Coffee is perfect during rainy days. Make a cup of coffee by answering the following. Write your answers on the space provided.

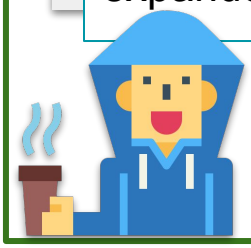
1. Write 4945.7 in expanded form.

2.) Write 6836.2 in expanded form.

3.) Write 1987.4 in expanded form.

4.) Write 7456.6 in expanded form.

5.) Write 8469.8 in expanded form.

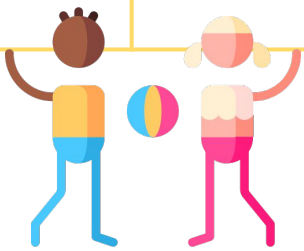


PLAY IN THE RAIN

G5 Advanced

You will be allowed to play outside while raining if you managed to answer the following. Transform the following decimals into expanded form. Write your answers on the space provided.

	Standard Form	Expanded Form
1	4.19	
2	5.46	
3	8.95	
4	7.58	
5	6.71	
6	2.85	
7	6.94	
8	1.32	

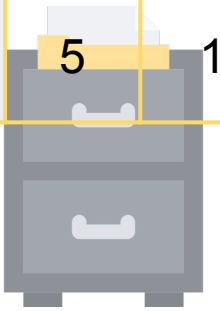


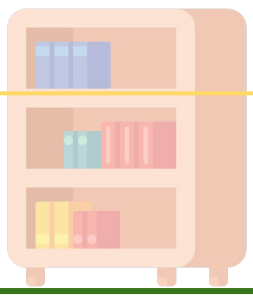
ARRANGE MY THINGS

G5 Advanced

Nothing to do during rainy days? Why not arrange your bookshelves and your cabinets? To do that, write the expanded form of the following decimals. Write your answer on the space provided.

	Tens	Ones	Decimal	Tenths	Hundredths	Expanded Form
1	5	6	.	4	9	
2	7	8	.	8	2	
3	4	1	.	2	9	
4	3	5	.	8	7	
5	6	1	.	7	3	
6	7	8	.	3	2	
7	3	4	.	2	8	
8	5	1	.	1	2	





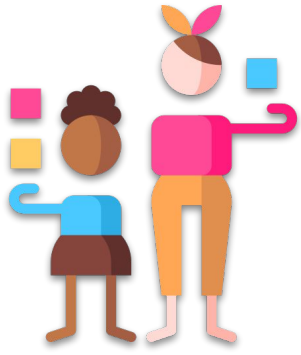
PUZZLE GAME

G5 Advanced

Come and let's play puzzle! Written below are decimals in expanded form, write the standard form by filling in the boxes. First item is for your example.

Hundreds	Tens	Ones	Decimal	Tenths	Hundredths
4	**6**	**3**	**.**	**8**	**6**

1. 400+60+3+0.8+0.06



Hundreds	Tens	Ones	Decimal	Tenths	Hundredths
			.		

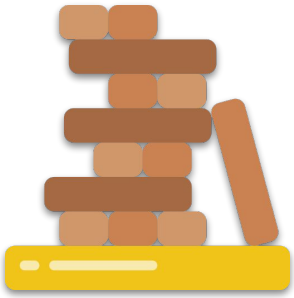
3. 500+60+7+0.9+0.04

Hundreds	Tens	Ones	Decimal	Tenths	Hundredths

2. 100+70+8+0.4+0.01

Hundreds	Tens	Ones	Decimal	Tenths	Hundredths
			.		

4. 700+80+2+0.5+0.03



5. 300+50+1 +0.7+0.05

BUILDING A FORT

G5 Advanced

Looks like it's a good idea to build a fort in the living room while raining! Answer the following so that your mom will allow you to build one. Write the expanded form on the space provided.

1. 498.521 = 400 + 90 + _____ + 0.5 + _____ + _____

2. 716.432 = 700 + 10 + _____ + 0.4 + _____ + _____

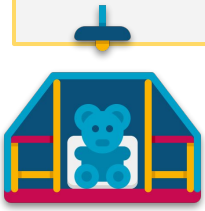
3. 165.784 = 100 + 60 + _____ + 0.7 + _____ + _____

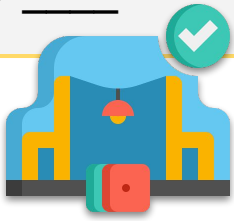
4. 742.578 = 700 + 40 + _____ + 0.5 + _____ + _____

5. 197.348 = 100 + 90 + _____ + 0.3 + _____ + _____

6. 754.684 = 700 + 50 + _____ + 0.6 + _____ + _____

7. 249.415 = 200 + 40 + _____ + 0.4 + _____ + _____



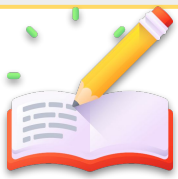


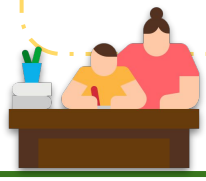
HOMEWORK TIME!

G5 Advanced

It's raining hard and you can't go outside to play. Your mom asked to do your homework below instead. Determine if the expanded form is equal to the given decimal. Write = if it is equal, otherwise write ≠ then write the correct answer on the space provided.

1.) 289.678		200 + 80 + 9 + 0.06 + 0.7 + 0.8	
2.) 124.845		100 + 20 + 4 + 0.8 + 0.04 + 0.005	
3.) 459.754		400 + 50 + 9 + 0.07 + 0.05+ 0.04	
4.) 178.678		100 + 70 + 8 + 0.6 + 0.07 + 0.008	
5.) 714.871		700 + 10 + 5 + 0.8 + 0.07 + 0.08	





ANSWER GUIDE

Activity 1

1.) 20 + 2 + 0.9
2.) 10 + 9 + 0.8
3.) 40 + 2 + 0.1
4.) 80 + 2 + 0.2
5.) 70 + 1 + 0.5

Activity 2

1.) b 2.) d 3.) e 4.) a 5.) c 6.) g 7.) f

Activity 3

1.) 40 + 2 + 0.8
2.) 30 + 4 + 0.1
3.) 70 + 5 + 0.9
4.) 10 + 8 + 0.7
5.) 30 + 5 + 0.4
6.) 40 + 1 + 0.2

Activity 4

1.) c 2.) a 3.) d 4.) f 5.) b 6.) e

Activity 5

1.) 4000 + 900 + 40 + 5 + 0.7
2.) 6000 + 800 + 30 + 6 + 0.2
3.) 1000 + 900 + 80 + 7 + 0.4
4.) 7000 + 400 + 50 + 6 + 0.6
5.) 8000 + 400 + 60 + 9 + 0.8

ANSWER GUIDE

Activity 6

1.) 4 + 0.1 + 0.09
2.) 5 + 0.4 + 0.06
3.) 8 + 0.9 + 0.05
4.) 7 + 0.5 + 0.08
5.) 6 + 0.7 + 0.01
6.) 2 + 0.8 + 0.05
7.) 6 + 0.9 + 0.04
8.) 1 + 0.3 + 0.02

Activity 7

1.) 50 + 6 + 0.4 + 0.09
2.) 70 + 8 + 0.8 + 0.02
3.) 40 + 1 + 0.2 + 0.09
4.) 30 + 5 + 0.8 + 0.07
5.) 60 + 1 + 0.7 + 0.03
6.) 70 + 8 + 0.3 + 0.02
7.) 30 + 4 + 0.2 + 0.08
8.) 50 + 1 + 0.1 + 0.02

Activity 8

1.) 463.86 2.) 178.41 3.) 567.94 4.) 782.53 5.) 351.75

Activity 9

1. 400 + 90 + 8 + 0.5 + 2 + 1
2. 700 + 10 + 6 + 0.4 + 3 + 2
3. 100 + 60 + 5 + 0.7 + 8 + 4
4. 700 + 40 + 2 + 0.5 + 7 + 8
5. 100 + 90 + 7 + 0.3 + 4 + 8
6. 700 + 50 + 4 + 0.6 + 8 + 4
7. 200 + 40 + 9 + 0.4 + 1 + 5

ANSWER GUIDE

Activity 10

1.) ≠ ; 200 + 80 + 9 + 0.6 + 0.07 + 0.008
2.) =
3.) ≠ ; 400 + 50 + 9 + 0.7 + 0.05+ 0.004
4.) =
5.) ≠ ; 700 + 10 + 4 + 0.8 + 0.07 + 0.001

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