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PERCENTAGES AND DECIMALS

EXAMPLE

Mei has an interest rate of 12% per month. **Turn Mei's interest rate into a decimal.**

12% = 12 ÷ 100 = 0.12

Turn these percentages into decimals.

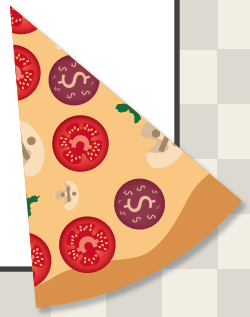
1. 15% = _____ ÷ 100 = _____
2. 24% = _____ ÷ 100 = _____
3. 3% = _____ ÷ 100 = _____
4. 75% = _____ ÷ 100 = _____
5. 150% = _____ ÷ 100 = _____

EXAMPLE

12% of 1,000
= 0.12 X 1,000
= 120

Calculate the percentage of a number.

6. 19% of 1,000 = _____ x _____ = _____
7. 6% of 412 = _____ x _____ = _____
8. 21% of 750 = _____ x _____ = _____
9. 50% of 500 = _____ x _____ = _____
10. 64% of 25 = _____ x _____ = _____



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KEEP IT INTERESTING

Calculate the interest using the equation **I = Prt**

I = interest: a fee paid to borrow money

P = principal: the amount being borrowed

r = rate: the percentage of interest a person will pay to borrow money, as a decimal

t = time: how much time they have to pay back all of the interest and principal from their loan

EXAMPLE

Mei would like to buy an e-bike. It is on sale for $2,000. Mei has already saved $1,000. She asks her brother if she can borrow $1,000 for three months until she can pay him back. He is willing to loan her the money, but she will have to help him make up for the interest he will lose by taking it out of his account. They agree that she will pay him 12% interest per month.

Calculate the interest Mei will owe.

I = P $1,000 x r 0.12 x t 3

I = $120 x 3

I = $360

In three months, Mei will owe $360.00 in interest.

11

Paris noticed the computer she wants to buy just went on a great sale. Normally, it costs $1,399, and is now only $1,099—but only until Friday. She has been saving up all year and has $675. She would like to borrow the rest of the money from her mom so she can buy it on sale. She promises to pay her loan back in six months with 5% interest each month.

How much principal does Paris need to borrow from her mom?

P= _____

How much interest will Paris owe in six months?

I = P _____ x r _____ x t _____

I= _____

In six months, Paris will owe $_____ in interest.

KEEP IT INTERESTING

12

Iggy needs to borrow $8,645 to help pay for his trip to Australia. The interest rate his bank offers him is 9.24% per year, and he plans to pay back the loan in four years.

How much interest will he owe?

I = P_____ x r_____ x t_____

I = _____

In four years, Iggy will owe _____ in interest.

13

Alex needed money to buy a tent. You decided to loan them $200 at 3% interest per month for five months. Alex paid you back as agreed and on time.

How much money did you make on this loan?

I = P_____ x r_____ x t_____

I = _____

In five months, you made $ _____ in interest.

KEEP IT INTERESTING

Now calculate the total amount due **(A).**

You can use **A = P (1 + rt)** or add the Principal to the Interest **(I= Prt).**

EXAMPLE

Calculate the total amount due on Mei's loan from her brother in the previous example.

A = P $1,000 + P $1,000 x r 0.12 x t 3
A = P $1,000 + I $360
A = $1,360.00

OR

A = P $1,000 (1+(r 0.12 X t 3))
A = $1,000 (1+0.36)
A = $1,000 X 1.36
A = $1,360.00

Mei owes her brother a total of $1,360.

14

Gert borrowed $500 from a friend at 20% interest per year.

How much interest will she owe at the end of one year?

How much will she owe in total at the end of that year?

KEEP IT INTERESTING

15

Jabari borrowed $20,000 from his grandma to put toward a car. His grandma will charge him 8% interest per year. The loan is due in three years.

How much in total will Jabari have to pay in three years?

16

Marshall asks his sister if he can borrow $40 to go to the movies. He promises to pay her back next week. She will give it to him, but since he has not always been good about paying her back, she will charge him 10% interest per day.

How much in total will Marshall owe her in seven days?

How much will he owe if he pays her back in only five days?

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ANSWER SHEET

1 15% = 15÷100 = 0.15

2 24% = 24÷100 = 0.24

3 3% = 3÷100 = 0.03

4 75% = 75÷100 = 0.75

5 150% = 150÷100 = 1.50

6 19% of 1,000 = 0.19 X 1,000 = 190

7 6% of 412 = 0.06 X 412 = 24.72

8 21% of 750 = 0.21 X 750 = 157.50

9 50% of 500 = 0.50 X 500 = 250

10 64% of 25 = 0.64 X 25 = 16

11 = $1,099 - $675

P = $424

How much interest will Paris owe in six months?

I = P $424 X r 0.05 X t 6

I = $127.20

In three months, Paris will owe $127.20 in interest.

12 I = P $8,645 X r 0.0924 X t 4

I = $3,195.19

In four years, Iggy will owe $3,195.19 in interest.

13 I = P $200 X r 0.03 X t 5

I = $30

In five months, you made $30 in interest.

14 I = 500 X 0.20 X 1
I = 100

Gert will owe $100 in interest in one year.

A = P + I
A = 500 + 100
A = $600

OR

A = $500 (1+(0.20 X 1)
A = $600

Gert will owe $600 in total at the end of one year.

15 I = $20000 X 0.08 X 3
I = 4800

A = P + I
A = $20000 + $4800
A = $24800

A = $20000 (1+(0.08 X 3)
A = $24800

In three years, Jabari will owe his grandma $24,800.

16 I = $40 x 0.10 x 7
I = $28

A = P + I
A = $40 + $28
A= 68

OR

A = $40 (1+(0.10 X 7)
A = $68

In seven days, Marshall will owe his sister $68.

A = $40 (1+(0.10 X 5)
A = $60

If Marshall pays her back in five days, he will only owe $60. He saves $8.