



6th
Basic

7th
Advanced

Helping With Math

USA
GRADES

Percentage

*Suitable for students
aged 10-12*



This pack is suitable for learners aged 10-12 years old or 6th to 7th grades (USA). The content covers fact files and relevant basic and advanced activities involving percentage.



Boxing Day is considered one of the largest sales events in the retail calendar because of the huge crowds of shoppers lured by the heavily discounted products at shopping malls. This is often celebrated every after Christmas, normally on the 26th day of December.

PERCENTAGE



- “per 100”
- used like fractions and decimals as a way to describe parts of the whole
- the symbol % is used
- comes from the Latin phrase *per centum*, meaning “per hundred”



CONCEPTS

PERCENTAGE

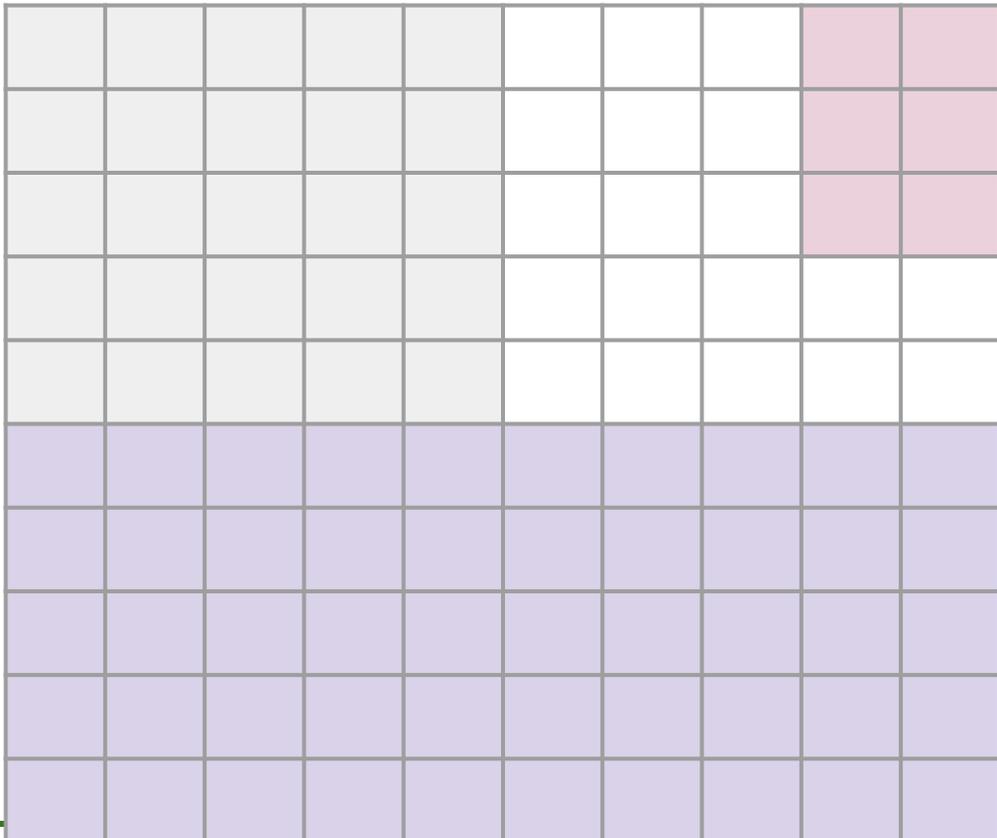
A number or ratio that can be expressed as a fraction of 100. In computing percentage, you must divide the number by whole and multiply it by 100. As its meaning goes, “per 100.”



Visualising Percentages

The grid below has 100 cells

- Fifty cells (purple cells) are equal to 50% of the whole or half ($\frac{1}{2}$)
- Twenty-five cells (gray cells) are equal to 25% of the whole or one quarter ($\frac{1}{4}$)
- Six cells are equal to 6% (pink cells)



EXAMPLES

Calculate 25% of 600

Solution:

$$25\% = 25/100$$

$$25/100 \times 600 = 150$$

So 25% of 600 is **150**



Calculate 12% of 200

Solution:

$$12\% = 12/100$$

$$12/100 \times 200 = 24$$

So 12% of 200 is **24**

Mel goes to the mall to buy dress for her daughter worth \$75. Since it is Boxing day, the dress is sale at 25%. Find the new price.

Solution:

$$25\% = 25/100$$

$$25/100 \times \$75 = \$18.75$$

25% of \$75 is \$18.75



Take the reduction from the original price

$$\$75 - \$18.75 = \$56.25 \text{ (new price of the dress)}$$

Exercise

Charlie goes to the mall to buy shoes for his son worth \$110. Since it is Boxing day, the shoes is sale at 30%. Find the new price.



TABLE OF ACTIVITIES

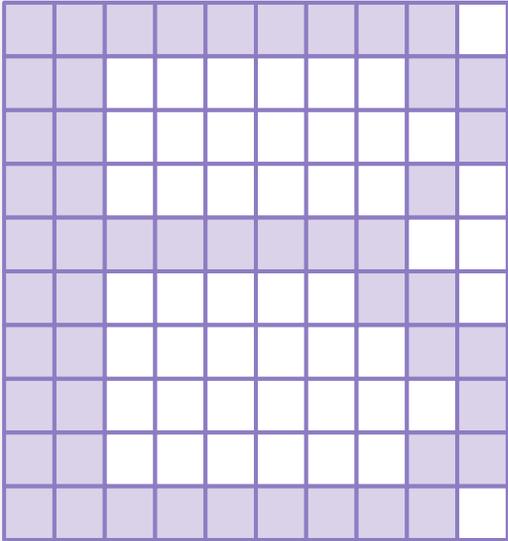
Age 10-11 (Basic)		6th Grade
1	Boxing Gifts	
2	“Per” in the Box	
3	Voucher Deals	
4	The Spirit of Boxing Day	
5	Online Shopping Test	
Age 11-12 (Advanced)		7th Grade
6	Celebrate Gift Giving	
7	Red and Green Boxes	
8	Boxing Day Preparation	
9	Post-Christmas Blues	
10	Penny for Your Thoughts	



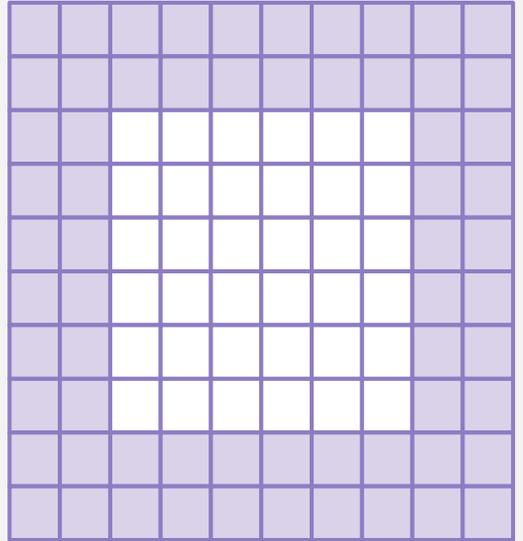
"PER" IN THE BOX

G6
Basic

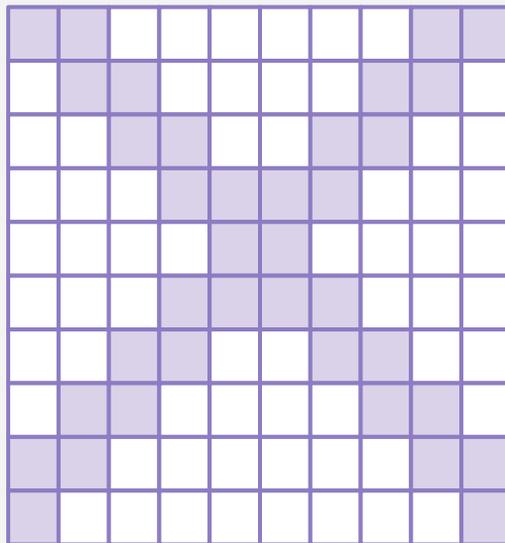
Boxing Day comes from a time when the rich prepared boxed gifts to give to the poor. The shaded cells form the word "box". Identify the percentage of the shaded cells.



1.



2.



3.



VOUCHER DEALS

G6
Basic

Fill in the blanks to get the voucher deals this Boxing Day. Show your solution on the space provided.



1.) _____ of 328
= 18.4

2.) 12% of _____
= 31.8

3.) 20% of _____
= 72.2

4.) 31% of 426
= _____

5.) 36% of 188
= _____

6.) _____ of 395
= 177.75

Solution:



THE SPIRIT OF BOXING DAY

G6
Basic

These people are ready for the celebration of Boxing Day. Help them to complete their tasks so that they can spend the day with their family. Read each question carefully and encircle the letter of the correct answer.

1. Which of the following is equal to 23.9%?

a.) 239 to 100

c.) $239 / 100$

b.) .239

d.) None of the above



2. Which of the following is equal to 350%?

a.) 35.0

c.) .350

b.) 3.50

d.) None of the above



3. Which of the following is equal to .0268?

a.) 2.68%

c.) 268%

b.) 26.8%

d.) None of the above



4. Which of the following is equal to 67.39%?

a.) 67.39

c.) .6739

b.) 6.739

d.) None of the above



ONLINE SHOPPING TEST

G6
Basic

Can you solve the percentage problems below? Ace it to get limited edition Boxing Day freebies and discount vouchers.

1. 10% of \$238

5. 30% of \$488

2. 15% of \$450

5. 35% of \$294

3. 20% of \$304

6. 40% of \$495

4. 25% of \$128



CELEBRATE GIFT GIVING

G7
Advanced

As we celebrate Boxing Day, let us remember the true spirit of gift-giving. In each correct answer, prepare a simple gift to people that you love.

1. 52% of \$555 =

6. 84% of \$880 =

2. 64% of \$600 =

7. 93% of \$900 =

3. 72% of \$730 =

8. 94% of \$950 =

4. 76% of \$800 =

9. 90% of \$1,150 =

5. 77% of \$850 =

10. 95% of \$1,320 =

Solution:



RED AND GREEN BOXES

G7
Advanced

Red and green boxes await you with many surprises this Boxing Day! Get the percentage of each given and reveal the mystery word. The values are indicated below to guide you.

B 25%
of
598

C 35%
of
760

D 60%
of
870



E 75%
of
998

M 90%
of
1,002

R 85%
of
878



522

748.5

266

748.5

901.8

149.5

748.5

746.3

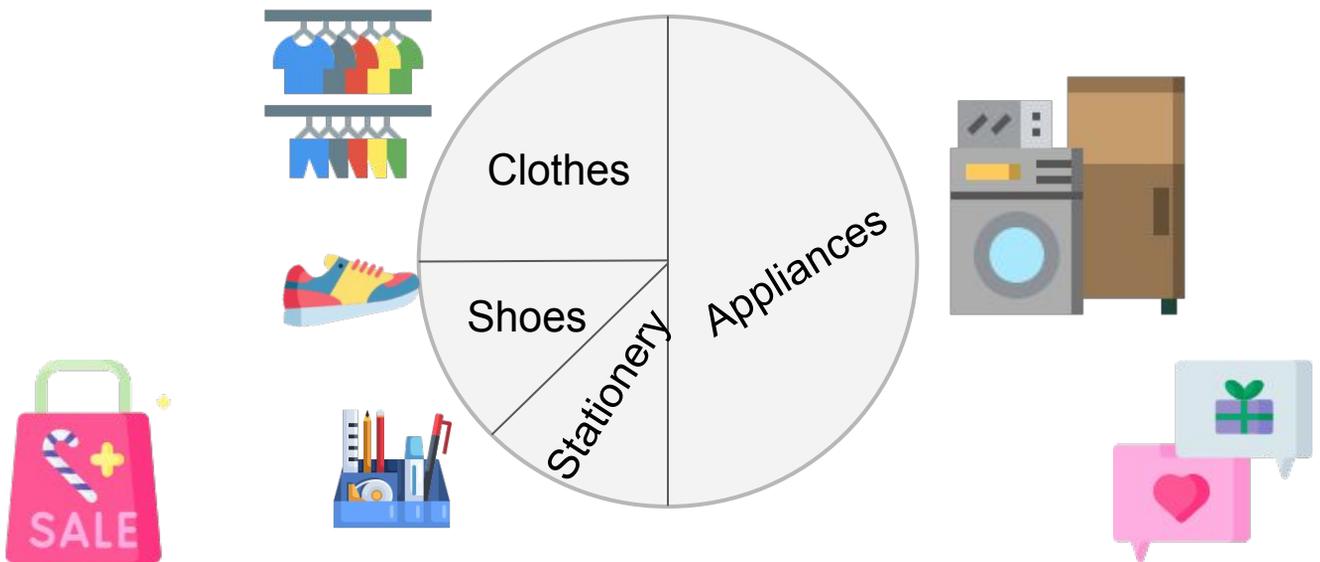


BOXING DAY PREPARATION

G7
Advanced

Help Nicole and her friends to figure out the answer to each problem. Hurry because Boxing Day is just around the corner!

In preparation for Boxing Day, Nicole asked her friends which sale items at the shopping mall will they get or a gift they want. She made a pie graph of the results.



1. What percentage of Nicole's friends prefer appliances as a gift?

2. What percentage of her friends would buy sale shoes?

3. If Nicole surveyed 15 boy friends, how many chose stationery?

4. If she surveyed 25 girl friends, how many chose clothes?



POST-CHRISTMAS BLUES

G7
Advanced

The situations below are common during Boxing Day. Apply your understanding of percentages to answer each.

1. Gio is a salesman in the Star shopping mall. He earns 5% commission every time he makes a sale. This Boxing day, he earned \$673. How much commission did he earn?

2. David wants to buy a new laptop that costs \$825. Since it is Boxing Day, there is a 15% off. How much is the new price of the laptop?

3. The television worth \$616 has 10% off the day before the Boxing Day. During the sale, another 5% off will be given. How much is the new price of the television if the customer purchased on Boxing Day sale?

Solution:

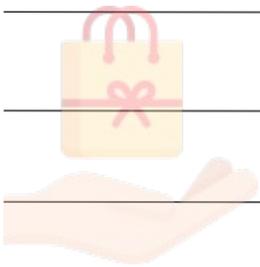


PENNY FOR YOUR THOUGHTS

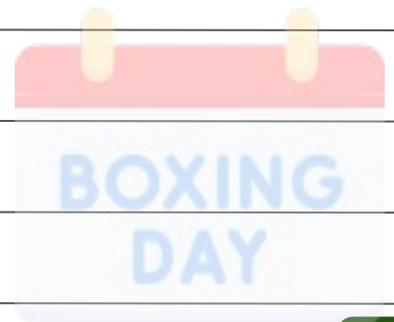
G7
Advanced

Relate the celebration of Boxing Day and your understanding of percentage. Answer the following questions.

What is the essence of percentage in relation to Boxing Day?



How can you use percentage in real life scenarios? Cite 3-4 examples and explain.



ANSWER GUIDE

Activity 1

Answers may vary.

Activity 3

- | | |
|--------|-----------|
| 1. 5% | 4. 132.06 |
| 2. 265 | 5. 67.68 |
| 3. 361 | 6. 45% |

Activity 5

- | | |
|---------|----------|
| 1. 23.8 | 4. 32 |
| 2. 67.5 | 5. 146.4 |
| 3. 60.8 | 6. 198 |

Activity 7

B=149.5 E=748.5
C=266 M=901.8
D=522 R=746.3
MYSTERY WORD:
DECEMBER

Activity 9

1. \$33.65
2. \$701.25
3. \$526.68

Activity 2

- | | |
|--------|--------|
| 1. 51% | 3. 38% |
| 2. 64% | |

Activity 4

- | | |
|------|------|
| 1. B | 3. A |
| 2. B | 4. C |

Activity 6

- | | |
|----------|-----------|
| 1. 288.6 | 6. 739.2 |
| 2. 384 | 7. 837 |
| 3. 525.6 | 8. 893 |
| 4. 608 | 9. 1,035 |
| 5. 654.5 | 10. 1,254 |

Activity 8

- | | |
|----------|------|
| 1. 50% | 3. 2 |
| 2. 12.5% | 4. 6 |

Activity 10

1. Answers may vary.



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