

Academic

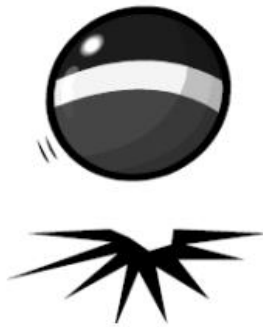
Grade 9 Assessment of Mathematics

Word Problems & Percent
Practice Materials



Education
Quality and
Accountability
Office

- 1** A ball is dropped from a height of 10 m above the ground. It bounces to **90% of its previous height** on each bounce.



What is the approximate height that the ball bounces to on the **fourth** bounce?

- A** 2.8 m
B 4.3 m
C 6.6 m
D 7.2 m
- 2** Eight more than half a number is thirteen. What is the number?
- A** 2.5
B 18
C 10.5
D 10

- 3** Juan would like to order some stationery items from a catalogue. He can spend up to \$15.00 but not more.

Guaranteed Low Prices!		
\$3.13/item  1" Binder	\$2.39/item  Glue Stick	\$4.28/item  Mechanical Pencil
\$1.96/item  Notebook	\$6.49/item  Stapler	\$1.51/item  Steel Clip
Plus 15% tax on all items		

Which of the following groups of items, including 15% tax, can Juan afford to buy with his \$15.00?

- a** One binder, one stapler and three steel clips
b Two steel clips, two binders and two notebooks
c One notebook, one stapler and one mechanical pencil
d One binder, one glue stick and two mechanical pencils

- 4 A container of yogurt contains 2% fat.



Paulo eats 250 mL of the yogurt.

How many millilitres of fat did his yogurt contain?

- A 2 mL
- B 5 mL
- C 50 mL
- D 125 mL

- 5 In a class there are 15 more boys than girls. There are 31 students in the class.

How many girls are in the class?

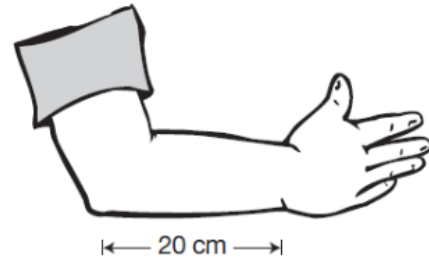
- A 16
- B 8
- C 23
- D 15

- 6 A basketball player scores 28 points in a game. She scores 35% of the total team points.

How many points does her team score in total?

- a 63
- b 65
- c 72
- d 80

- 7 Louis's forearm measures 20 cm.



Gregory's forearm is 125% the length of Louis's forearm.

How much **longer** is Gregory's forearm than Louis's?

- A 4 cm
- B 5 cm
- C 16 cm
- D 25 cm

8**Card Collecting**

Andre, Laura, and Danielle each collect baseball cards.

- Andre has three more than double the number of cards that Danielle has.
- Laura has four fewer cards than Danielle.
- All together they have a total of 43 cards.

Use an equation to determine the number of cards that each person has in their collection.

Show your work.

9

Competing Sales

Sam is interested in buying a TV. At *Fair Deal*, the TV is regularly priced at \$599.99 and is on sale for 20% off the regular price. At *Big Big Discount*, the same TV is regularly priced at \$899.99 and is on sale for 30% off the regular price.

What is the difference in the sale price of the TV between these two stores?

Show your work.

10 **Disc-ussion**

Tyler, Raven, and Deb are discussing the number of CDs they each own. They find that the following statements are true:

- Tyler owns five more than twice the number of CDs Raven owns.
- Deb owns three times as many CDs as Tyler

Using x to represent the number of CDs Raven owns, write an expression for the total number of CDs the three friends own. Show your work and simplify your answer

11**CD Sell-Off**

Juan belongs to a CD club that sells CDs for \$11.44 each before tax. His first shipment of CDs costs \$90.49 including 13% tax.

How many CDs are in his first shipment?

Show your work.

12

Josie works in a sports store. She receives 8% of the total sales each day. One day, she receives \$35 for her portion of the total sales. What are the total sales for that day?

- a \$37.80
- b \$43.75
- c \$280.00
- d \$437.50

13

In a school with 900 students, there are 300 boys.



40% of the girls at the school went to the dance.

How many girls went to the dance?

- A 120 girls
- B 240 girls
- C 360 girls
- D 600 girls

14

Bob is thinking of a number. He adds 15 to his number and finds that the result is four times his number.



Suppose x is Bob's number. Which equation is always true?

- a $15 - x = \frac{x}{2}$
- b $15 - x = 4x$
- c $x + 15 = \frac{x}{4}$
- d $x + 15 = 4x$

15

Eric works 16 hours a week and earns \$8.50 per hour.

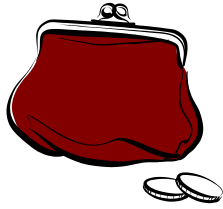
He saves 70% of his earning for university.

How much money does he have left over each week to spend?

- A \$ 106.00
- B \$ 95.20
- C \$ 66.00
- D \$ 40.80

16

A wallet contains \$9.10 in dimes and quarters. There are 21 more dimes than quarters.



How many quarters are in the wallet?

- A 41
- B 36
- C 26
- D 20

17

The length of a rectangular field is 23 m more than the width.

The field has a total perimeter of 114 m.

What is the length of the field?

- A 45.5 m
- B 17 m
- C 40 m
- D 68.5 m

18

Raul is saving up to buy an MP3 player that costs \$174.55, plus 13% tax.



He currently has \$67 in his bank account and plans to save \$6 per week.

How many weeks will it take until he can afford to buy the MP3 player?

- A 41
- B 36
- C 26
- D 22

Answers

- | | | |
|------|---------------|-------|
| 1] C | 8] Andre: 25 | 12] D |
| 2] D | Laura: 7 | 13] B |
| 3] C | Danielle: 11 | 14] D |
| 4] B | 9] \$150 | 15] D |
| 5] B | 10] $9x + 20$ | 16] D |
| 6] D | 11] 7 | 17] C |
| 7] D | | 18] D |

