

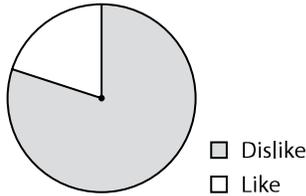
Mental Math

Grade 11 Essential Mathematics (30S)

C-1

Unit C: Statistics

Specific Learning Outcome: 11.E3.S.1

General Questions	Answers
1. Convert the following decimal to a percent: 0.005	0.5%
2. Convert the following percent to a decimal: 345%	3.45
3. Convert the following fraction to a percent: $\frac{4}{5}$	80%
4. For every 10 people in the world, four are Asian. Write this as a percentage.	40%
5. Yesterday, Malaki spent five hours in school, two hours in the gym, and nine hours sleeping. How many hours of the day are not accounted for?	8 hours
Unit Questions	
<p>Answer questions 6 to 8 using the following information.</p> <p>In Mr. Innu's math class, there are 25 students. Of the 25 students, 20 students like math and 5 students dislike math.</p>	<p>Student Opinions of Math</p> 
6. What is the mistake in the pie chart?	Dislike and Like need to switch colours.
7. What percentage of students dislike math?	20% or $\left(\frac{5}{25}\right)$
8. Based on this percentage, predict how many students would dislike math if there were 50 students.	10
Other Questions	
9.	
10.	

Mental Math

C-2

Grade 11 Essential Mathematics (30S)

Unit C: Statistics

Specific Learning Outcome: 11.E3.S.1

General Questions

1. Dania invests \$5000 and earns compound interest. It takes eight years to double. Using the rule of 72, estimate the interest rate.
2. How much tax would you have to pay on an item that costs \$99.99 if the PST = 7% and the GST = 5%?
3. How long is the interest-free period if Zach buys a snowboard on November 27th and he does not have to pay until December 13th?
4. Are the following two fractions equal: $\frac{6}{8}$ and $\frac{13}{16}$?
5. Jeewon is at the movies with her friends. She spends \$11.00 on her ticket, \$4.00 on a drink, and \$5.50 on ice cream. If she started with \$25.00, how much does she have left?

Answers

9%

\$12

16 days

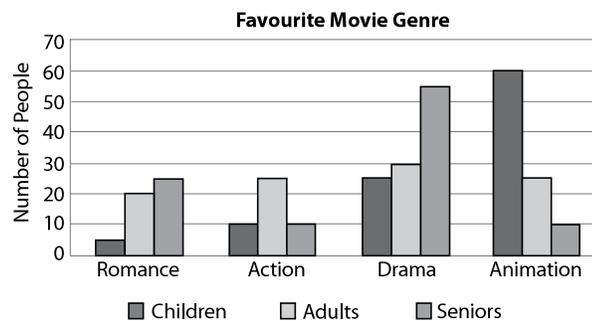
No

\$4.50

Unit Questions

Use the following bar graph to answer questions 6 to 8.

Three hundred people participated in the survey.



6. Estimate how many people are interested in romance movies.
7. Which genre was the favourite of seniors?
8. What percent of the people are children whose favourite movie genre is animation?

≈ 50

Drama

20%

Other Questions

9.

10.

Mental Math

C-3

Grade 11 Essential Mathematics (30S)

Unit C: Statistics

Specific Learning Outcome: 11.E3.S.1

General Questions

1. Write two equivalent fractions for $\frac{9}{6}$.
2. A cube is 1 m tall, 2 m wide, and 3 m deep. What is the volume of the cube?
3. From your house, you walk 10 m south, 8 m east, 10 m north, and 6 m west. How far are you from your house?
4. A cylinder has a volume of 60 mm^3 . What is the volume of a cone with the same radius and height?
5. If 10% of people do not like the colour brown and there are five people in your family, how many people do you expect to not like the colour brown in your family?

Answers

Possible answers:

$$\frac{3}{2}, \frac{18}{12}, \frac{6}{4}, \frac{12}{8}, \dots$$

$$6 \text{ m}^3$$

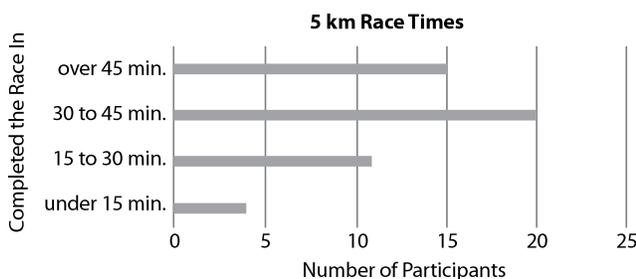
2 m east

$$20 \text{ mm}^3$$

1 or 0 (can't be half a person)

Unit Questions

Use the following bar graph to answer questions 6 to 8.



6. How many people finished in under 15 minutes?
7. There were 50 participants in the race. What percentage of people finished in over 45 minutes?
8. If there were 200 participants, predict how many people would finish the race in 15 to 30 minutes.

4

30%

44

Other Questions

9.

10.

Mental Math

C-4

Grade 11 Essential Mathematics (30S)

Unit C: Statistics

Specific Learning Outcome: 11.E3.S.1

General Questions

1. Sara and Leon are sharing the cost of a car so that they don't have to use their parents' car anymore. If the car will cost \$14,000, how much will each of them have to pay?
2. Are the following two fractions equal: $\frac{25}{100}$ and $\frac{7}{28}$?
3. There are 18 marbles in a bag—6 green and 12 blue. Write the number of blue marbles as a fraction of the total number of marbles.
4. Insu spent \$45.75 at the mall on Boxing Day. If he used a \$100 gift card to pay, how much money is left on the card?
5. Your car has a hole in the dashboard for a stereo. The dimensions are 15 cm wide by 4 cm tall by 12 cm deep. The stereo you want to buy is 10 cm deep by 16 cm wide by 5 cm tall. Will this stereo fit into the dashboard?

Answers

\$7000

Yes, both $\frac{1}{4}$

$\frac{12}{18}$ or $\frac{2}{3}$

\$54.25

No

Unit Questions

Answer questions 6 to 8 using the following information. Jane is saving up money to buy a \$5000 car. To motivate herself, she makes a graph of how much money she saves up weekly compared to days worked.

6. What is the independent variable?
7. If Jane saves up \$57 in week one, \$48 in week two, and \$45 in week three, what is her average weekly savings?
8. Based on her average savings, predict how much Jane will save in a year.

Days worked

\$50/week

About \$2500 or exactly \$2600

Other Questions

9.

10.

Mental Math

C-5

Grade 11 Essential Mathematics (30S)

Unit C: Statistics

Specific Learning Outcome: 11.E3.S.1

General Questions

- The volume of a square pyramid is 8 m^3 . What is the volume of a prism with the same dimensions (length, width, and height)?
- Seok Yong plays on a school sports team. Based on the following clues, decide whether he plays on the basketball team, hockey team, soccer team, or volleyball team. (a) He does not like to be cold. (b) There are no extra pads required. (c) He scored 34 points in their last game.
- Convert the fraction to a percent: $\frac{25}{50}$
- There is a cube with each side length equal to 1 cm. What is the surface area of the cube?
- Complete the pattern. 10, 100, 1000, _____, _____

Answers

24 m^3

basketball

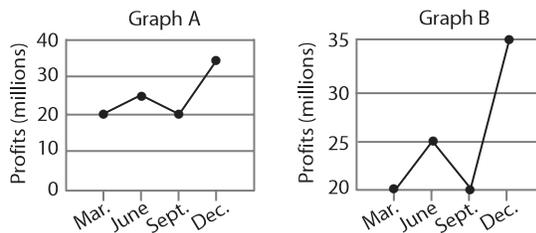
50%

6 cm^2

10 000,
100 000

Unit Questions

Answer questions 6 to 8 using the following two line graphs. Both graphs depict Squarebucks' Quarterly Profits in 2015.



- Using Graph A, what is the difference (in millions) between December's profit and June's profit?
- Using Graph B, what is the difference (in millions) between December's profit and June's profit?
- Why is Graph B misleading?

\$10 million

\$10 million

Profits axis
doesn't start at 0.

Other Questions

9.

10.

