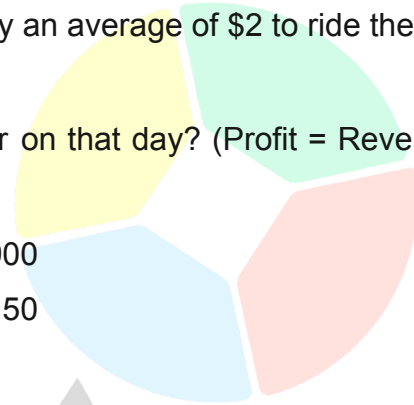


- 1 The total daily cost of operating the roller coaster at Dreamworld is \$600 plus 50 cents per person who rides the roller coaster.

On a particular day, a total of 1 500 people pay an average of \$2 to ride the roller coaster.

How much was the profit of the roller coaster on that day? (Profit = Revenue – Expenses)

- A \$2 400  
B \$2 250  
C \$1 650  
D \$900  
E \$150



- 2 The cost of renting a van for a weekend road trip is  $D$  dollars, which will be shared equally among the people joining the trip.

If 8 people instead of 12 will join the trip, which expression gives how many more dollars, in terms of  $D$ , will it cost per person?

- A  $4D$   
B  $2D$   
C  $D/3$   
D  $D/4$   
E  $D/24$

- 3 According to new regulations, a returning tourist must pay an 8 percent tax on the first \$400 or less of imported goods and a 10 percent tax for the total value in excess of \$400.

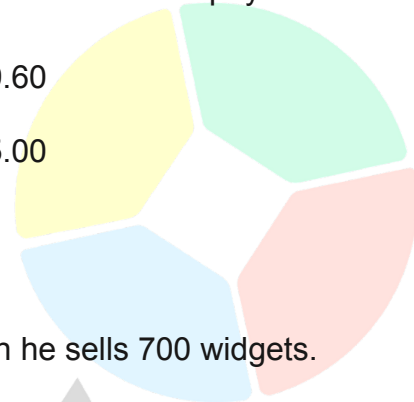
If a returning tourist pays \$98 in tax, what is the value of the imported goods the tourist is bringing into the country?

- A \$880  
B \$900  
C \$980  
D \$1 060  
E \$1 380

- 4 A vendor sells an item at a 20 percent markup in price.

If the vendor sells the item for \$12, how much did the vendor pay for the item?

- A \$14.40                      D \$9.60  
B \$14.00                      E \$5.00  
C \$10.00



- 5 A merchant wants to make a profit of \$75 when he sells 700 widgets.

It costs 65 cents to make the first 100 widgets and 55 cents to make each widget after the first 100.

What price should the merchant charge for the 300 widgets?

- A \$75                              D \$240  
B \$175                            E \$250  
C \$225

- 6 It costs \$50 to manufacture a radio.

The radio was initially put on sale at 108 percent of its manufacturing cost.

A week later, the initial selling price was discounted by 10 percent, and the radio was sold.

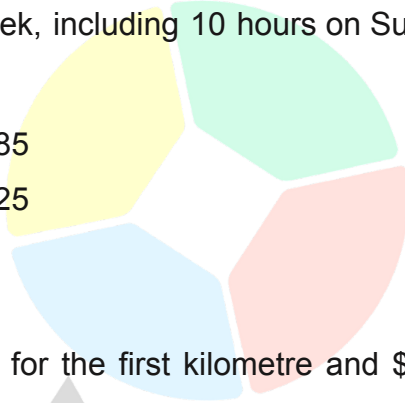
The radio was sold at what price?

- A \$45.00                      D \$49.50  
B \$48.60                      E \$54.00  
C \$49.00

- 7 Penelope earns \$5.50 per hour on days other than Sundays and twice that rate on Sundays.

If Penelope worked a total of 50 hours last week, including 10 hours on Sunday, what were her earnings last week?

- A \$275  
B \$330  
C \$350  
D \$385  
E \$425



- 8 The rental cost for a ride on the yacht is \$85 for the first kilometre and \$5 per kilometre after that.

If the total cost of the ride was \$365, how many kilometres were the ride?

- A 55 kilometres  
B 56 kilometres  
C 57 kilometres  
D 58 kilometres  
E 59 kilometres

- 9 Cookie Monster sells cupcakes and brownies.

Each cupcake sells for \$5, and each brownie sells for \$4.

If Cookie Monster sold 8 cupcakes and brownies for \$34, how many brownies did he sell?

- A 2 brownies  
B 3 brownies  
C 4 brownies  
D 5 brownies  
E 6 brownies

- 10** A returning tourist can import goods with a value of \$600 or less tax-free.

But if the value of the imported goods exceeds \$600, the tourist must pay a 15 percent tax on the portion of the value in excess of \$600.

How much tax must a returning tourist pay who imports goods valued at \$870?

- A \$35.50  
B \$40.50  
C \$45.00  
D \$90.00  
E \$130.50

- 11** Jake earns a fixed rate per hour for the first 40 hours he works and \$30 for each hour he works after the first 40 hours.

If Jake works for 48 hours and earns \$920, how much was he paid per hour for the first 40 hours he worked?

- A \$15  
B \$16  
C \$17  
D \$18  
E \$19

- 12** ACME Corporation reported total sales of \$768 million for this year.

If the reported total sales for last year were \$640 million, what was the percentage increase in total sales this year compared to last year?

- A 5 percent  
B 15 percent  
C 17 percent  
D 20 percent  
E 24 percent

- 13** Chocolate cupcakes sell for \$2 each, and vanilla cupcakes sell for \$1 each.

If Big Bird buys 18 chocolate cupcakes and 12 vanilla cupcakes, what is the average (arithmetic mean) price he pays per cupcake?

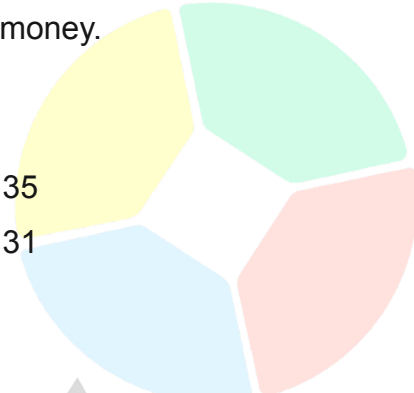
- A \$1.20  
B \$1.40  
C \$1.50  
D \$1.60  
E \$2.00

- 14 Betty and Veronica together have \$278 to spend at the mall.

Betty spends \$8 on a pair of socks, at which point she has twice as much money as Veronica, who has not yet spent any of her money.

How much money does Betty initially have?

- A \$188  
B \$147  
C \$139  
D \$135  
E \$131



- 15 For the premiere night of the new Avengers movie, 560 tickets were sold for a total of \$21 500.

If a balcony seat ticket costs \$25 and an orchestra seat ticket costs twice as much as a balcony seat ticket, how many of the tickets sold were balcony seat tickets?

- A 235 tickets  
B 260 tickets  
C 300 tickets  
D 325 tickets  
E 358 tickets

- 16 The new law requires a returning tourist to pay an 8 percent tax on the first \$500 or less worth of imported goods and a 15 percent tax for the total value in excess of \$500.

How much tax must a returning tourist pay who imports goods valued at \$720?

- A \$33  
B \$70  
C \$73  
D \$92  
E \$108

17 It costs  $D$  dollars to buy  $B$  equally priced books.

Which expression gives the number of books that can be bought with \$40?

A  $40B/D$

B  $40BD$

C  $D/40B$

D  $(B + 40)/D$

E  $(B - 40)/D$

18 A plumber charges \$8 per hour for the first 8 hours and  $\frac{3}{2}$  times that rate for each hour in excess of the first 8 hours.

If the plumber was paid \$80 yesterday, how many hours did the plumber work yesterday?

A 6 hours 40 minutes

B 9 hours 20 minutes

C 9 hours 30 minutes

D 9 hours 40 minutes

E 10 hours

19 A worker is paid  $M$  dollars for the first 8 hours he works each day.

If he works more than 8 hours a day, he is paid  $N$  dollars per hour for each hour he works in excess of 8 hours.

Last week, he worked 8 hours on Monday, 11 hours on Tuesday, 9 hours on Wednesday, 10 hours on Thursday, and 9 hours on Friday.

Which expression gives the worker's average (arithmetic mean) daily wage, in dollars, last week?

A  $M + 1.4N$

B  $2M + N$

C  $(5M + 8N)/5$

D  $8M + 1.4N$

E  $5M + 7N$

- 20 The cost of staying at the motel is \$18 per day for the first week and \$10 for each additional day after the first week.

How much does it cost to stay at the motel for 23 days?

- A \$160  
B \$274  
C \$282  
D \$286  
E \$289

- 21 On any given day, Elmo is paid \$6 per hour for the first 8 hours he works and  $1\frac{1}{2}$  times that rate for each hour in excess of the first 8 hours.

If Elmo worked 10 hours yesterday, what was his average (arithmetic mean) hourly wage yesterday?

- A \$6.60  
B \$7.50  
C \$8.40  
D \$8.50  
E \$9.00

- 22 A litre of paint costs \$3.20 and is enough to paint an area of 20 square metres.

How much will it cost to paint the outside of a cube 10 metres on each edge?

- A \$1.60  
B \$16.00  
C \$96.00  
D \$108.00  
E \$196.00

- 23 At Greendale Pizzeria, each pizza cost \$11.

In addition, each additional pizza topping costs \$4 for the first pizza ordered and \$3 for each additional pizza ordered.

If Archie ordered  $P$  pizza and each pizza had exactly one additional pizza topping, which expression gives the total dollar cost for the pizza Archie ordered?

- A  $11P + 1$   
B  $11P + 4$   
C  $14P + 1$   
D  $14P + 2$   
E  $14P + 4$

- 24** Homer Simpson is buying a new TV that has a sticker price of \$455.

The sales tax for the TV comes out at 5 percent, but Homer Simpson is able to negotiate a purchase price that is a 20 percent discount off the sticker price.

How much sales tax did Homer Simpson pay for the new TV?

- A \$4.55  
B \$9.10  
C \$15.60  
D \$18.20  
E \$22.75

- 25** Michael is paid **D** dollars per hour for the first 8 hours he works in a day and **C** dollars for every hour after the first 8 hours.

Last week, Michael worked 12 hours on Monday, 7 hours on Tuesday, 11 hours on Wednesday, 6 hours on Thursday, and 4 hours on Friday.

Which expression gives the dollar amount of Michael's average (arithmetic mean) hourly wage last week?

- A  $40D/(40 + C)$   
B  $8(D + C)$   
C  $(8D + 8C)/5$   
D  $(33D + 7C)/40$   
E  $D + C$

- 26** A piggy bank contains only 5-cent coins, 10-cent coins, and 20-cent coins.

There are four times as many 5-cent coins as 10-cent coins and twenty fewer 20-cent coins than 5-cent coins in the piggy.

If the total value of the coins in the piggy bank is \$5.90, how many 20-cent coins are there?

- A 19  
B 18  
C 16  
D 15  
E 14



- 27** Each post-it pad costs 70 cents and each sharpener costs 50 cents at the school supply store.

If Barbie spent \$6.30 on post-it pads and sharpeners and purchased at least one of both items, how many post-it pads and sharpeners did she buy?

- A 9  
B 10  
C 11  
D 12  
E 13

- 28** At the Walk for A Cause charity event, Jiminy Cricket can raise 75 cents for every kilometre he walks.

If Jiminy Cricket was able to raise \$18 during the event, how many kilometres did he walk?

- A 12 kilometres  
B 18 kilometres  
C 21 kilometres  
D 22 kilometres  
E 24 kilometres

- 29** We Ship It Right charges a handling fee of 75 cents when shipping an item worth \$25 or less and a handling fee of \$1 when shipping an item worth over \$25.

If Hermes shipped three items worth \$18.25, \$25, and \$127.50, respectively, how much handling fee must he pay?

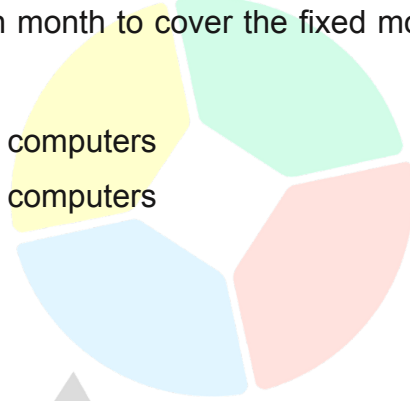
- A \$1.75  
B \$2.25  
C \$2.50  
D \$2.75  
E \$3.00

30 The fixed monthly operating cost of a computer store is \$5 000.

If the store buys each computer for \$600 and sells it for \$900, what is the least number of computers the store must sell each month to cover the fixed monthly operating cost?

- A 14 computers
- B 15 computers
- C 16 computers

- D 17 computers
- E 18 computers



Scholarly