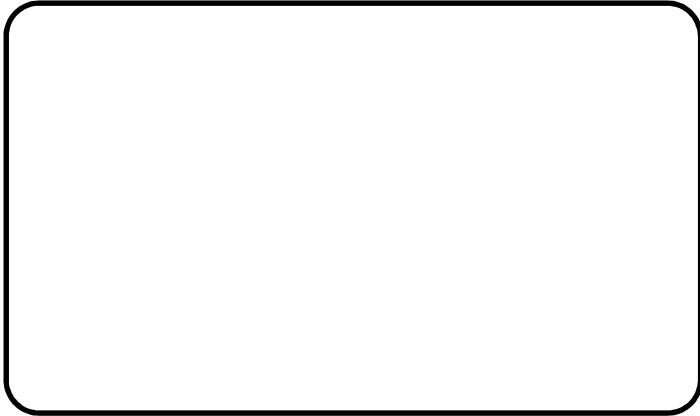


- 1** Consider the proportion below.

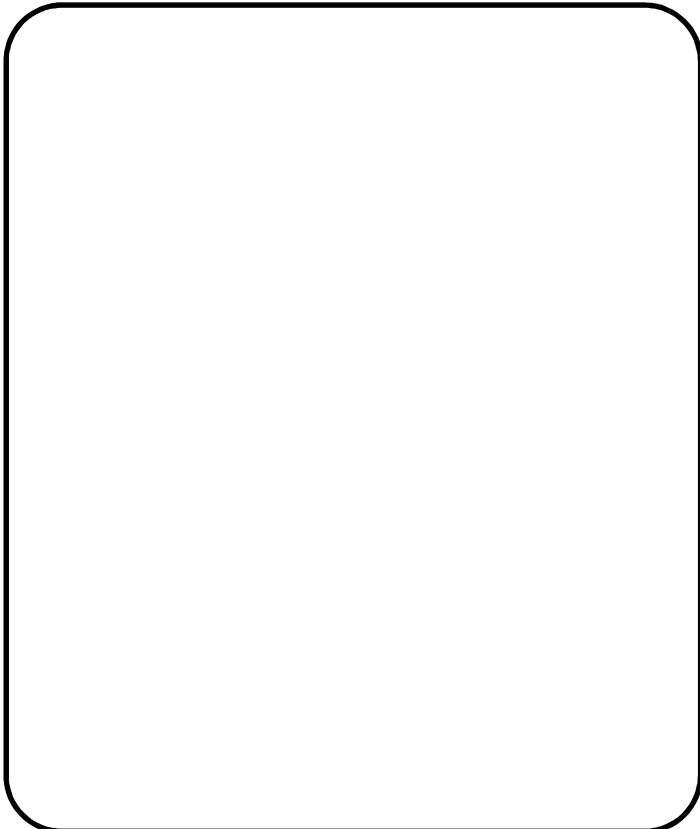
$$\frac{3}{4} = \frac{a}{24}$$

What is the value of  $a$  in the proportion?



- 2** A small case of pop, with 12 cans, costs \$3.96. A large case has 18 cans. The cost per can in the large case is \$0.02 less than in the small case.

What is the cost of a large case?



- 3** A basketball club offers two types of memberships.

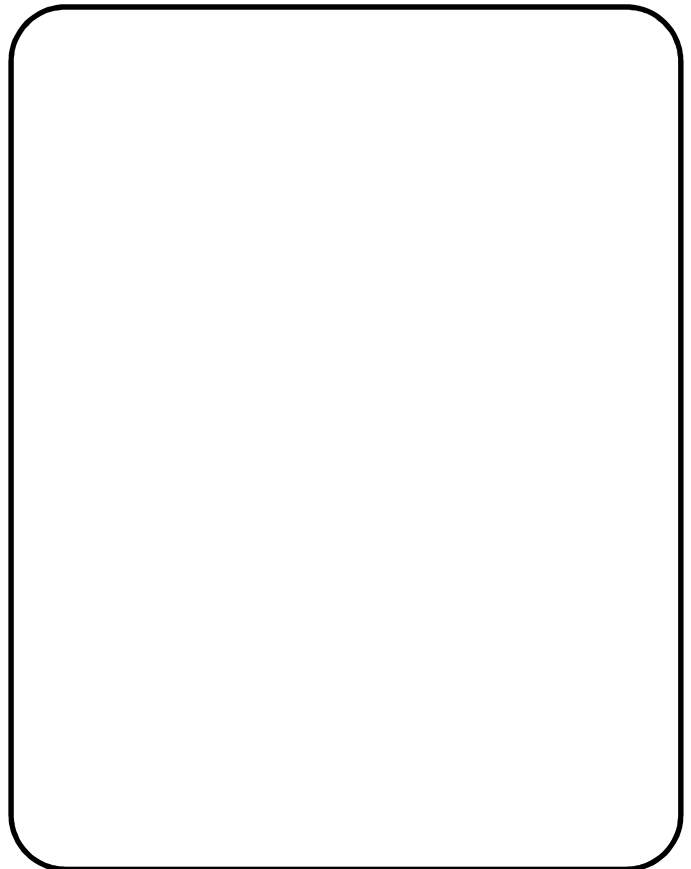
- Membership Y: No registration fee and \$15 per hour for court time.
- Membership Z: \$40 registration fee and \$5 per hour for court time.

Which of these relationships is a partial variation, and what is its initial cost?

- a Membership Y; \$0
- b Membership Y; \$15
- c Membership Z; \$5
- d Membership Z; \$40

- 4** A taxi charges a flat fee of \$3.75, plus \$1.50 per kilometre driven.

What is the total cost of a 10 km trip?



## 5 Road Trip!

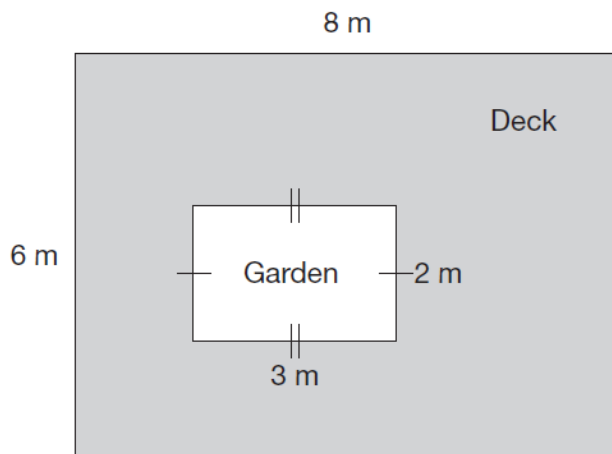
Paul drives from home to his friend's house and then back home.

- The distance from Paul's home to his friend's house is about 720 km.
- On average Paul's car uses 6.8 L of gas for every 100 km.
- Gas costs 96.5 cents a litre.

How much does Paul pay in total for gas to his friend's house and back home?

Show your work.

6 Ollie constructs a rectangular deck. He builds the deck around a garden in his yard as shown below.



What is the area of the deck?

**7** In the first year of a fundraising campaign, donations are collected at a rate of \$700 each day for 8 days.

In the second year, the daily rate doubles and the campaign is 3 days longer.

How much money is raised in the second year?

**8** In an election for student council president, 480 students vote.

Jade receives 55% of the votes. Ericka receives the rest of the votes.

How many votes does Ericka receive?

**9** Sanjay makes \$20 per day plus \$8 for every magazine subscription he sells.

Which of the following tables shows data from the relationship between his total daily pay and the number of subscriptions he sells?

a

Number of subscriptions sold	Total daily pay (\$)
0	20
1	28
2	36
3	44
4	52

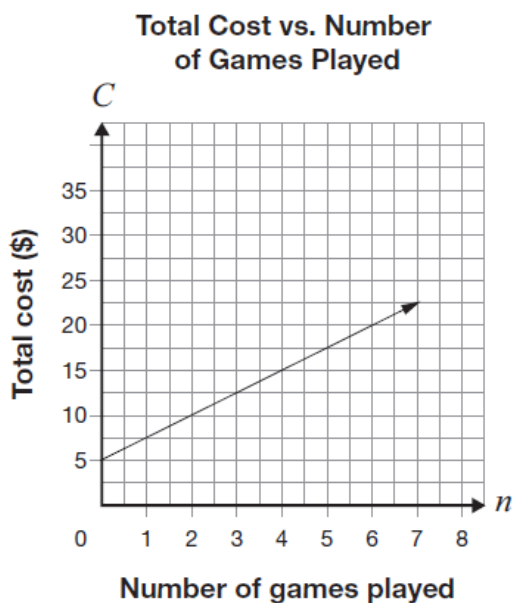
b

Number of subscriptions sold	Total daily pay (\$)
0	20
1	20
2	20
3	20
4	20

c

Number of subscriptions sold	Total daily pay (\$)
0	8
1	28
2	48
3	68
4	88

- 10** An arcade charges each customer an admission fee plus a cost to play each game. The relationship between the total cost,  $C$ , and the number of games played,  $n$ , is shown on the grid below.



Which equation below represents this relationship?

- a  $C = 0.5n + 5$
- b  $C = 0.5n + 7.5$
- c  $C = 2.5n + 5$
- d  $C = 2.5n + 7.5$

- 11** The table below shows information about the linear relationship between the total cost per month of Sylvie's cellphone plan and the number of text messages she sends.

Month	Number of text messages	Total cost (\$)
January	60	28
February	20	24
March	30	?

According to this relationship, what is Sylvie's total cost for March?

- 12** The table below shows the relationship between the cost to rent a bicycle,  $C$ , and the number of hours,  $n$ .

Number of hours, $n$	Rental cost, $C$ (\$)
0	10
1	13
2	16
3	19

Which equation represents this relationship?

- a  $C = 3n$
- b  $C = 10n$
- c  $C = 3 + 10n$
- d  $C = 10 + 3n$