

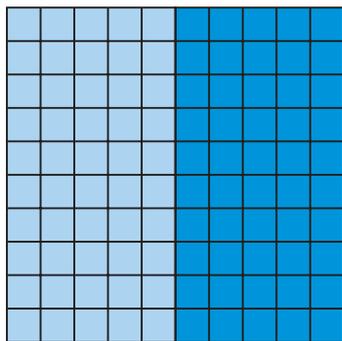
# Pondering Percentages

## Activity

Sohan is explaining to Yvette, Leonie, and Andrew why  $\frac{1}{2}$  is 50 percent.

Percentage means “out of 100”. 50 out of a 100 is  $\frac{1}{2}$ .

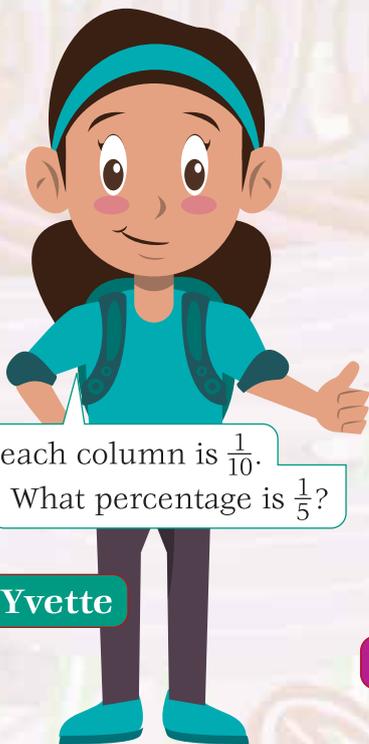
He shows them this grid:



50 squares out of 100 are shaded on this hundredths grid. So that's  $\frac{1}{2}$  or 50 percent.



- Yvette, Leonie, and Andrew have some questions for Sohan. Answer their questions, using a hundredths grid to help you.



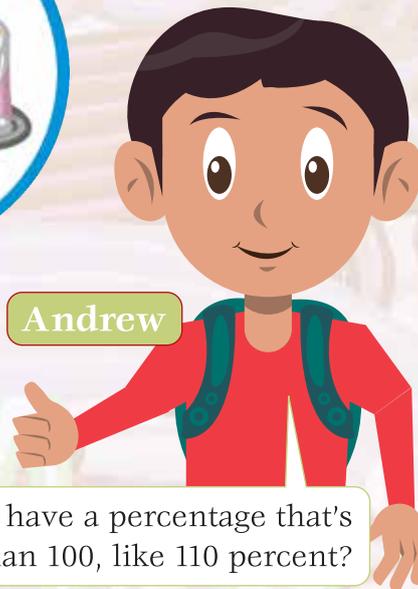
So each column is  $\frac{1}{10}$ .  
What percentage is  $\frac{1}{5}$ ?

Yvette



So  $\frac{1}{4}$  is half of  $\frac{1}{2}$  ...  
What percentage is that?

Leonie

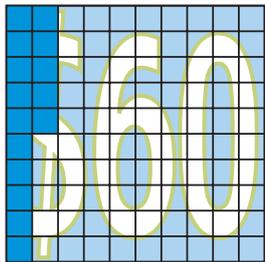


Andrew

Can you have a percentage that's more than 100, like 110 percent?

2.

Sohan challenges Yvette, Leonie, and Andrew to find 15 percent of \$60.



Imagine the whole square is \$60. Then put the hundredths grid on top of it and shade in the first 15 squares.



15% of \$60 must be 10% + 5%.  
Or you can say 20% - 5%.

There are 10 columns. So each column represents  $\frac{10}{100}$  or  $\frac{1}{10}$  of \$60. That's 10%!

10% of \$60 is \$6. So 5% is \$3.  
 $\$6 + \$3 = \$9$ .

I like your grid idea, Sohan.

But couldn't you also show 15 percent of \$60 on a double number line?



- a. Use any of the above ideas to help you find:
- |                   |                   |
|-------------------|-------------------|
| i. 20% of \$55    | ii. 15% of \$80   |
| iii. 40% of \$130 | iv. 75% of \$28   |
| v. 95% of \$40    | vi. 125% of \$48. |
- b. Discuss with a classmate the best way to find each answer.
- c. With your classmate, try these harder ones:
- |                  |                                |
|------------------|--------------------------------|
| i. 40% of \$36   | ii. 80% of \$35                |
| iii. 65% of \$24 | iv. $12\frac{1}{2}\%$ of \$96. |