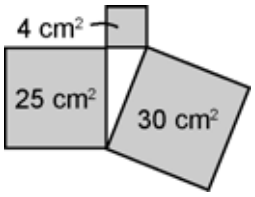
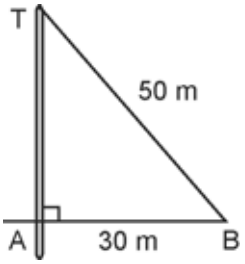
Chapter 4 Warm-Up

Section 4.1

1. Is this a right triangle? Justify your response.

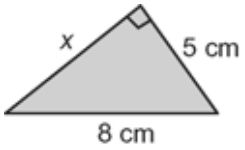


2. How high is this pole?



3. List the whole numbers that have a square root between 8 and 9.

4. What is the length of the missing side? Round the answer to the nearest tenth of a centimetre.



5. Estimate the square root of 105 to one decimal place.

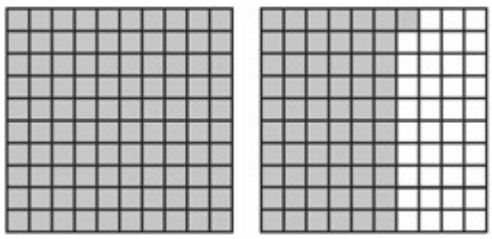
Mental Math

6. What is the square of 6?
7. What is the square of 10?
8. What is the square of 11?
9. What is the square root of 25?
10. What is the square root of 64?

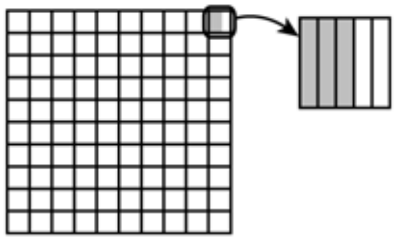
Section 4.2

1. What percent is represented on these grids?

a)



b)



2. Show the following on hundred grids.

a) 147% **b)** $102\frac{2}{3}\%$

3. One bottle of vinegar sells for 500 mL for $0.95. A 1000-mL bottle sells for $1.49. Which is the better buy? Show how you know.

4. One team member runs 200 m in 25 s. Another runs 300 m in 35 s. Who is faster? Show how you know.

5. A baker shapes 3 rolls in 15 s. What is his unit rate per min?

Mental Math

6. What is the approximate square root of 50? How do you know?

7. What is the approximate square root of 22? How do you know?

8. $\frac{15}{20} = \frac{\square}{4}$

9. $\frac{30}{6} = \frac{5}{\square}$

10. $\frac{75 \text{ km}}{3 \text{ h}} = \frac{\square \text{ km}}{6 \text{ h}}$

Section 4.3

1. Convert each fraction to a decimal and a percent.

a) $\frac{2}{25}$ **b)** $\frac{89}{300}$ **c)** $\frac{11}{9}$

2. Convert each decimal to a percent and a fraction.

a) 1.005 **b)** 4.75

3. Convert each percent to a decimal and a fraction.

a) 225% **b)** 0.92% **c)** $45\frac{4}{5}\%$

4. A cat's first litter had 2 kittens. The second litter had 5 kittens. What percent is the second litter of the first one?

5. a) Smoked salmon costs \$19.98/kg. Estimate and then calculate the cost of 3 kg of smoked salmon.

b) 1 kg = 1000 g. Use a proportion to calculate the cost of 1500 g of smoked salmon. Show your proportion.

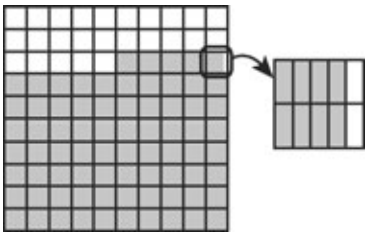
Mental Math

6. Show 50% as a fraction.

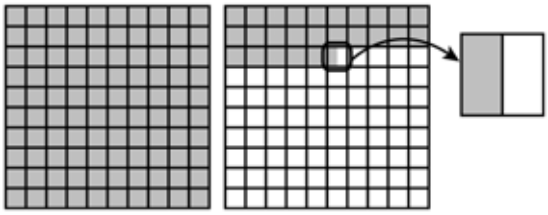
7. Show 5% as a fraction.

8. Show 0.5% as a fraction.

9. Show this number as a percent, a fraction, and a decimal.



10. Show this number as a percent, a fraction, and a decimal.



Section 4.4

1. Calculate $\frac{2}{5}\%$ of 1200.

2. Calculate $45\frac{3}{4}\%$ of 800.

3. Calculate 125% of $450.

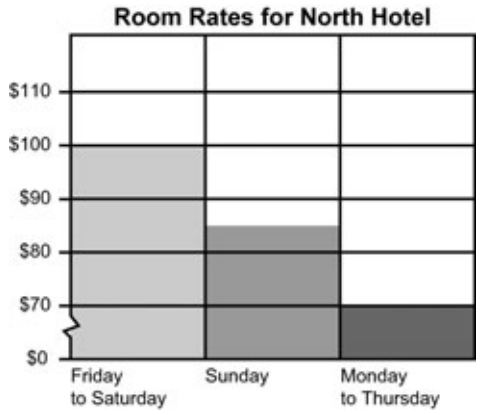
4. Three hundred tickets are sold in a raffle. You buy one. What is your chance of winning?

5. a) What is the room rate for a hotel room on Thursday night?

b) What is the room rate for a hotel room on Friday night?

c) How is this graph misleading?

d) How would you represent the data more accurately?



Mental Math

6. What is 120% of 10?

7. What is 0.2% of $5000?

8. What is $3\frac{1}{2}\%$ of $10 000?

9. $\frac{2}{\square} = \frac{\square}{25} = \frac{14}{35}$

10. How many triangles would there be in Figure 8?