Chapter 10 Warm-Up

Section 10.1

1. Make a table of values for $3a - 5 = b$. Use five integer values for a.

2. Graph the values in #1.

3. Is the equation in #1 a linear relation? Justify your response.

4. Evaluate $y = -5x$ if $x = -3$.

5. If a horse moves at an average speed of 7 km/h, how far will the horse go in 2.5 h?

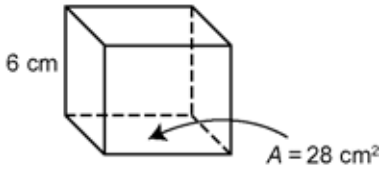
Mental Math

For #6 and #7, use integers to complete the statement in as many ways as possible.

6. $\square \times \square = 9$

7. $45 \div \square = \square$

8. Estimate the volume of the following prism.

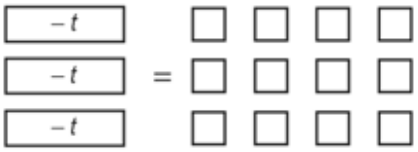


9. Mentally calculate the surface area of the prism in #8. Show your thinking.

10. Estimate $\sqrt{95}$.

Section 10.2

1. Write the equation modelled by the algebra tiles.



2. By what number would you divide each side of the equation in #1 to solve it?

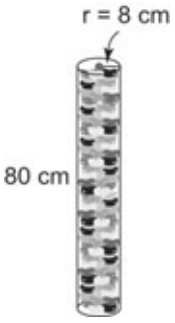
3. Solve the equation in #1.

4. Solve $\frac{-b}{5} = -15$.

5. Verify your answer for #4.

Mental Math

6. Mentally estimate the volume of the prism. Show your thinking.



7. Solve $6 \times \frac{1}{20}$.

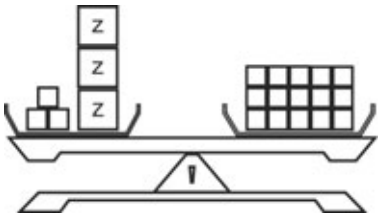
8. Show $1\frac{1}{2}$ as an improper fraction.

9. Evaluate $1\frac{1}{2} \times \frac{2}{3}$.

10. Evaluate $2 \div \frac{1}{7}$.

Section 10.3

1. Solve the equation modelled by the balance.



2. Verify your solution to #1.

3. What is the first operation you should perform to solve each equation?

a) $28 = -5n + 3$

b) $3r - 6 = 48$

4. Solve and verify each of the equations in #3.

5. Is the relationship in this table linear? Explain how you know.

a	5	10	15	25
b	1	2	3	4

Mental Math

6. Convert $3.\overline{3}$ to a percent and a fraction.

7. Convert 524% to a decimal and a fraction.

8. Convert $\frac{3}{8}$ to a decimal and a percent.

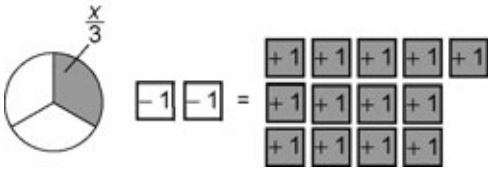
9. You scored two baskets in the first game. In the final game, you scored 150% of this number. How many baskets did you score in the final game?

10. Estimate the following values. Show your thinking.

a) $\sqrt{116}$ **b)** $\sqrt{32}$

Section 10.4

1. Solve the equation represented by the diagram.



2. What is the first operation you should perform to solve each equation?

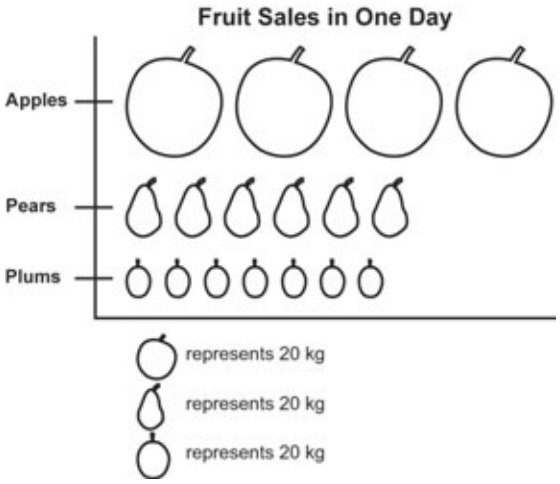
a) $\frac{p}{-2} + 4 = 12$

b) $-22 = \frac{t}{-7} + 6$

3. What is the second operation you should perform to solve each equation from #2?

4. Solve and verify each of the equations in #2.

5.



a) From the pictograph, which fruit seems to sell the best? Explain.

b) Redraw the pictograph to represent the data more accurately.

Mental Math

For #6 to #10, determine the missing value.

6. $\frac{35 \text{ beats}}{1 \text{ min}} = \frac{\square \text{ beats}}{7 \text{ min}}$

7. $\frac{33¢}{\square ¢} = \frac{\$3.30}{10¢}$

8. $3\frac{2}{5} = \frac{\square}{5}$

9. $\frac{55}{7} = \square \frac{\square}{\square}$

10. $\frac{3}{7} \times \square = 1$