$\qquad$
$\qquad$ Due: $\qquad$ Score: $\qquad$ / $\qquad$

Percent: $\qquad$ $=\frac{}{10}$
2. You have been given the mass and volume of different-sized wood blocks.
a. Complete the table below.
b. Is the relationship between mass and volume proportional? Yes / No

If no: why not
If yes: What is the Unit Rate of mass to volume? $\qquad$

| Volume (L) | Mass (kg) |
| :---: | :---: |
| 3 | 1.2 |
| 4 | 1.6 |
| 5 | 2 |
| 6 |  |
| 7 | 2.8 |
| 12.50 | 5 |
| 15 |  |
| 20 |  |

3. Naomi was playing keep away with her siblings. She is trying to keep the ball away from her brother.
a. Is the relationship between the height of the ball and time proportional? Yes / No

| Time (sec) | Height (ft) |
| :---: | :---: |
| 0 | 4 |
| 1 | 7 |
| 2 | 8 |
| 3 | 7 |
| 4 | 4 |

If no: why not? $\qquad$
If yes: What is the Unit Rate per second?
4. You have been given the mass and volume of different-sized bricks.
a. Complete the table below.
b. Is the relationship between mass and volume proportional? Yes / No If no: why not?

If yes: What is the Unit Rate of mass to volume? $\qquad$

| Volume (L) | Mass (kg) |
| :---: | :---: |
| 2.5 | 5 |
| 3.5 |  |
| 5 | 10 |
| 6 | 12 |
| 8 |  |
| 10 |  |

5. The table below shows the costs of JR Plumbing. They have an initial fee of $\$ 45$ for making the house call.

| Hours | 0 | 1 | 2 | 3 |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Plumbing <br> Cost | $\$ 45$ | $\$ 70$ |  | $\$ 120$ | $\$ 145$ |

a. Complete the table above.
b. Is the relationship between hours of service and the plumbing cost proportional? Yes / No If no: why not? $\qquad$
If yes: What is the Unit Rate per hour? $\qquad$
Review. Use the order of operations to simplify the problems below.
6. $-32 \div 4(3-5)^{2}+|-12|=$
7. $10 \div 2(4-3)^{2}+(-10)$

Factor the following:
8. $-15 x+35$
9. $28-36 y$
10. $-6 x y-14 x$

