2016 Mathematics Standards of Learning

Algebra Readiness Formative Assessment

7.10a

1. On Monday, Richard worked for 4 hours and earned $36. On Tuesday, Richard worked for 6 hours and earned $54. On Wednesday, Richard worked for 5 hours and earned $45.

Are his earnings proportional?

What is the rate of change for his earnings?

Represent his earnings in a *y* = *mx* function, where hours are represented by *x* and earnings are represented by *y*, and *m* represents the rate of change*.*

If Richard worked for 7 hours on Thursday, how much money would he earn?

How many hours did Richard work on Friday, when he earned $81

1. Given:

| *x* | *y* |
| --- | --- |
| 2 | 2.2 |
| 4 | 4.4 |
| 6 | 6.6 |

Which rate of change (*m)*, would represent this proportional relationship?

1. *m* = 0.2
2. *m* = 1.1
3. *m* = 2.2
4. *m* = 2
5. Given:

| *x* | *y* |
| --- | --- |
| 3 | 6.3 |
| 6 | 12.6 |
| 9 | 18.9 |

Which equation would represent this proportional relationship?

1. *y* = 0.2 *x*
2. *y* = 1.1 *x*
3. *y* = 2.1*x*
4. *y* = 2 *x*
5. Which of the following represents a proportional relationship between the x- and y-values?

| *x* | *y* |
| --- | --- |
| 1 | 5 |
| 2 | 6 |
| 3 | 7 |



| *x* | *y* |
| --- | --- |
| 1 | 1 |
| 2 | 5 |
| 3 | 9 |



| *x* | *y* |
| --- | --- |
| 2 | 3 |
| 4 | 5 |
| 6 | 7 |



| *x* | *y* |
| --- | --- |
| 2 | 3 |
| 4 | 6 |
| 6 | 9 |

Virginia Department of Education 2018