

Math 3

1-3 The Meaning of Factors

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| **Name:** |  | **Date:** |  |

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| **Common Core Standards** | [CCSS.MATH.CONTENT.3.OA.A.1](http://www.corestandards.org/Math/Content/3/OA/A/1/)  Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*  [CCSS.MATH.CONTENT.3.OA.A.3](http://www.corestandards.org/Math/Content/3/OA/A/3/)  Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. |

1-3 The Meaning of Factors



Identify:

Below is a multiplication equation.



What are the factors?

Answer: 7 and 5

What is their product?

Answer: 35



Situation 1:

My product is 32. The two factors are directly related to each other. If you multiply the first factor by 2, you will get the other factor. These two factors have a product of 32.

What do you think are the factors of 32 that apply to the description?

**\_ x \_**

How many factors does 32 have?

Situation 2:

My product is 42. The two factors are consecutive to each other. The two factors have a sum of 13. These two factors have a product of 42.

What do you think are the factors of 42 that apply to the description?

**\_ x \_**

How many factors does 42 have?

Part A: Task Cards

Match the pink card to the blue card by getting the pair of factors that multiply to 36.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **1.** | | **36** | |  | |  | | --- | | **a.** | | **2** | |
|  |  |  |
| |  | | --- | | **2.** | | **3** | |  | |  | | --- | | **b.** | | **6** | |

|  |
| --- |
| **3.** |
| **18** |
| **c.** |
| **12** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **4.** | | **6** | |  | |  | | --- | | **d.** | | **4** | |
|  |  |  |
| |  | | --- | | **5.** | | **9** | |  | |  | | --- | | **e.** | | **1** | |

Part B: List down all the factors of the following products. Afterwards, get the sum of the factors.

1. 50

2. 45

3. 24

4. 27

Part C: Odd Man Out

Cross out the number that is not a factor of the given product.

1. 21 

2. 33

3. 12

4. 40

5. 32

6. 54

|  |  |  |  |
| --- | --- | --- | --- |
|  | **ANSWER KEY** | | |
|  | **Situation 1** | **4 x 8**  **6 factors** | |
|  | **Situation 2** | **6 x 7**  **8 factors** | |
|  | **Part A:** | **1. e.**  **2. c.**  **3. a.**  **4. b.**  **5. d.** | |
|  | **Part B:** |  | |
|  | **1.** | **1, 2, 5, 10, 25, 50**  **Sum: 93** | |
|  | **2.** | **1, 3, 5, 9, 15, 45**  **Sum: 78** | |
|  | **3.** | **1, 2, 3, 4, 6, 8, 12, 24**  **Sum: 60** | |
|  | **4.** | **1, 3, 9, 27**  **Sum: 40** | |
|  | **Part C:** | |  | |
|  | **1.** | | **2** | |
|  | **2.** | | **12** | |
|  | **3.** | | **8** | |
|  | **4.** | | **6** | |
|  | **5.** | | **5** | |
|  | **6.** | | **13** | |