

## Similarity

Directions: Your team will become an expert on Similarity by completing several problems from each text regarding that area. Finally, you will briefly present what you have learned to the rest of the group.

Please use a *student textbook* and read over the problems given. If the problem is in **bold**, please complete the problem in your teams. Materials will be provided for bold problems only.

### Problems:

#### Foundations for Algebra 1

- MB 86- 90 (using proportions for similar figures)

#### Foundations for Algebra 2

- **RS 72,73**, 74-77 (similar figures are enlargements are reductions)
- RS 85, 113-117 (using proportions for similar figures)
- RS 86-91, 99-104 (ratios of similarity)
- RS 132,146 (all circles are similar)
- MG 1,2, 12-14 (ratios of dimensional change)

#### Algebra Connections

- 2-99→2-100, 2-109 (using proportions with similar figures)

#### Geometry Connections

- 1-19,20 (enlargement of similar figures)
- **3-1,3-2** (characteristics of similar figures)
- 3-10→3-15 (proportional growth and ratios)
- 3-32 (application of proportional growth)
- Section 3.2.1 → Section 3.2.6 triangle similarity
- **5-41→5-43** (special triangles are similar)
- **8-61, 8-62**, 8-63,8-64, 8-71 →8-74 (area ratio of similar figures)

#### Materials Needed:

1. 3-1,3-2: rubber bands, resource page, scissors
2. 8-61 resource page

# Probability

Directions: Your team will become an expert on Probability by completing several problems from each text regarding that area. Finally, you will briefly present what you have learned to the rest of the group.

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## Problems:

### Foundations for Algebra 1

- JM 5-7, 13 (probability vocabulary)
- JM 16-21 (independent vs. dependent)
- **JM 31-33** (probability experiment)
- JM 43, 58-60 (poll)
- JM 62 (tree diagrams)
- JM 114-119 (causations vs. correlation)

### Foundations for Algebra 2

- MD 1-6 (conduct experiment, review vocabulary)
- **MD 14-16** (generic rectangles for compound probability)
- MD 45,49 (compound probability)

### Algebra Connections

- Not covered

### Geometry Connections

- **4-48**→**4-52** (systematic list and tree diagrams)
- 4-59→4-62 (theoretical and experimental probability)
- **4-68,4-69** (area models – generic rectangles)
- 10-54→10-57 (experimental and theoretical probability with spinners)
- **10- 64, 10-65**, 10-75→10-77 (calculating expected value)

### Materials Needed:

1. JM 31-33: bags of marbles, resource page

## Distributive Property

Directions: Your team will become an expert on Distributive Property by completing several problems from each text regarding that area. Finally, you will briefly present what you have learned to the rest of the group.

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### Problems:

#### Foundations for Algebra 1

- **MP 93,94** (generic rectangle for multiplication of whole numbers)
- GH 60-63 (generic rectangles for multiplication of mixed numbers)

#### Foundations for Algebra 2

- GC 16-20 (generic rectangle for multiplication of whole numbers)
- GC 31, 67, 87, 96, 109 (Factored, distributed, simplified tables)
- **GC 54-56a-c** (generic rectangle for multiplication of variable expressions)
- GC 87 (distributive property with solving equations)

#### Algebra Connections

- **5-1,5-2, 5-10,5-11** (using tiles to see ear in two forms – sum and product)
- 5-21→**5-24** (generic rectangles for multiplication of polynomials)
- **8-1→8-4, 8-12→8-15** (factoring with generic rectangles)

#### Geometry Connections

- Factoring with generic rectangles is reviewed in homework sections (i.e. 2-8, 2-70)

### Materials Needed:

1. GC 54: algebra tiles
2. 5-1: Algebra  $xy$  tiles, equations mats

## Solving Equations

Directions: Your team will become an expert on Solving Equations by completing several problems from each text regarding that area. Finally, you will briefly present what you have learned to the rest of the group.

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### Foundations for Algebra 1

- AR-48, 50-52 (algebra puzzles), AR-58 (homework)
- GS 61-64 (inverse operations)
- **GS 74** (cover-up method)

### Foundations for Algebra 2

- MC 14 (cover-up method)
- MC 38-42, 54-58 [**MC 38,39,55,56**] (cups and tiles)
- GC 87 (distributive property with solving equations)

### Algebra Connections

- 2-22→2-27 (ways to represent algebraic expressions)
- 2-34→2-39 (creating zero with tiles)
- **2-48, 2-49, 2-57(only 2 parts of a-f), 2-64** (comparing expressions)
- **2-65** (recording work when simplifying expressions)
- **2-75** (solving for x)
- 3-78 (guess my number game)
- 5-33→5-37 (solving equations with the distributive property)

### Geometry Connections

- Solving equations is reviewed in homework and class work (i.e. 2-5, 2-52)

### Materials Needed:

1. MC 38: Cups and Tiles, resource page
2. 2-22: Algebra  $xy$  tiles, equations mats

## **Discussion Points:**

- What methods does the curriculum use to **introduce a topic**?
- What methods does the curriculum use to **reinforce a topic**?
- How are the methods from the different texts **alike**?
- How are the methods from the different texts **different**?