

Warm-Up:

1. The ratio of the areas of two similar triangles is 9:16. Find the ratio of their corresponding medians.

$$\sqrt{\frac{9}{16}} = \frac{3}{4} \quad 3:4$$

2. The lengths of the corresponding sides of two similar trapezoids are in the ratio 2:5. If the area of the smaller trapezoid is 48 in², what is the area of the larger trapezoid?

$$\frac{\text{Area of small}}{\text{Area of large}} = \frac{4}{25} = \frac{48}{x}$$

$$4x = 1200$$

$$x = \boxed{300 \text{ in}^2}$$

$$(\text{Ratio of sides})^2 = \text{Ratio of areas}$$

Homework ????? (WB p. 64)

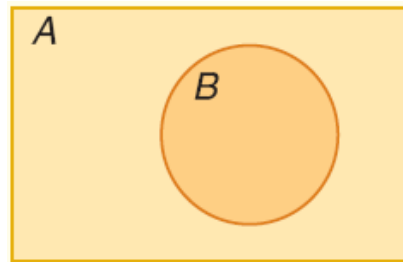
LESSON 8.6 • Area and Similarity

- | | | | |
|------------------------|----------|-------------------|-------------------------------------|
| 1. 5.4 cm ² | 2. 4 cm | 3. $\frac{9}{25}$ | 4. $\frac{36}{1}$ |
| 5. $\frac{25}{4}$ | 6. 16:25 | 7. 2:3 | 8. $888\frac{8}{9}$ cm ² |
| 9. 1296 tiles | | | |

Geometric Probability

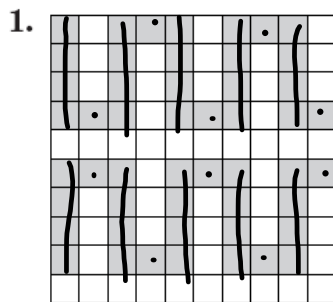
The probability that a point chosen in region A is also in region B is as follows:

$$P(B) = \frac{\text{area of region B}}{\text{area of region A}}$$



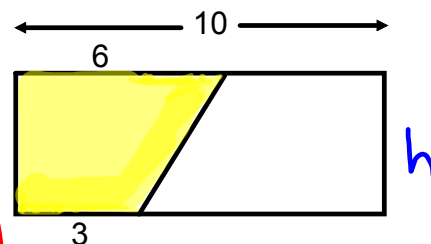
In other words, the probability of being inside a certain region is the ratio of that region's area to the total area.

Find the probability that a point chosen at random lies in the shaded region.



Total Area = 100 u^2
Shaded Area = 50 u^2

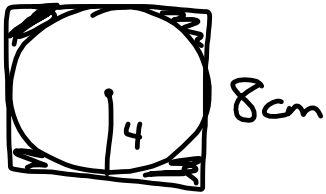
$$\frac{50}{100} = \frac{1}{2} \text{ or } 50\% \text{ or } .5$$



Area of Trapezoid
 $\frac{1}{2} h (3+6) = 4.5h$

Area of Rectangle
 $10 \cdot h = 10h$

$$P = \frac{4.5h}{10h} = .45 \text{ or } 45\% \text{ or } \frac{9}{20}$$

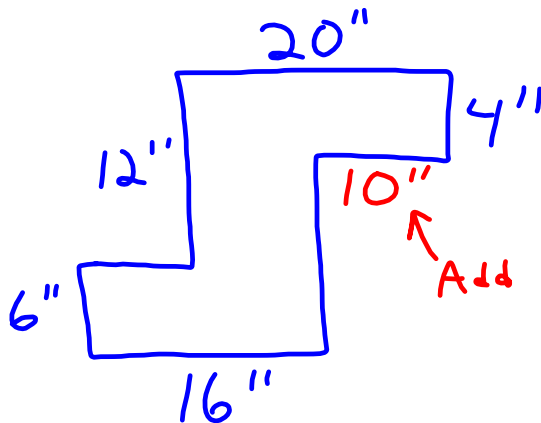


$$\text{Area of Square} = 64 \text{ cm}^2$$

$$\text{Area of circle} = 16\pi \text{ cm}^2$$

$$\text{Area of shaded} = 64 - 16\pi \text{ cm}^2$$

$$\text{Probability} = \frac{64 - 16\pi}{64} \approx .21$$



Work on area and probability worksheet with your groups.

Assignment:

- Finish worksheet
- First Review (at least front side)
- ~~• Go over quiz (understand mistakes)~~

Chapter 11 Test will be Thursday, April 27