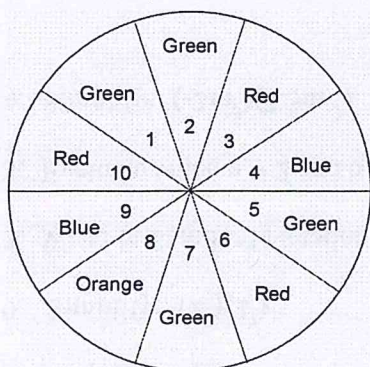1. Use the spinner below to find each probability. Give answer as a fraction without reducing.

a) P(Green or Odd)   b) P(Multiple of 3 and Red)

c) P(Factor of 24 or Blue)   d) P(Prime and Orange)   e) P(Even | Red)

2. This semester the probability that you schedule a science class is $\frac{4}{11}$ and the probability that you schedule a history class is $\frac{3}{8}$. Find each probability as a percent to the nearest tenth.

a) Find the probability that your schedule for this semester contains a science class or a history class.

P(Science or History)=

b) Find the probability that for 1st hour you will schedule a science class or a history class.

P(Science or History)=

3. In your pocket you have the following coins: 5 dimes, 4 nickels, and 3 quarters. You randomly take out a coin and put it in the vending machine, etc. Find the following probability as a fraction without reducing:
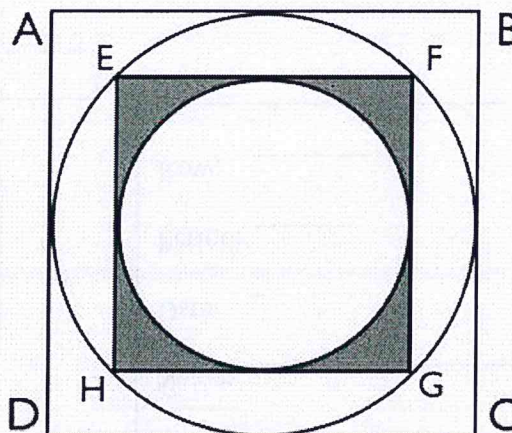
P(Quarter then Dime then Nickel then Dime) =

For 4 and 5, find the probability that a point picked at random in the figures is in the shaded region as a percent to the nearest tenth.
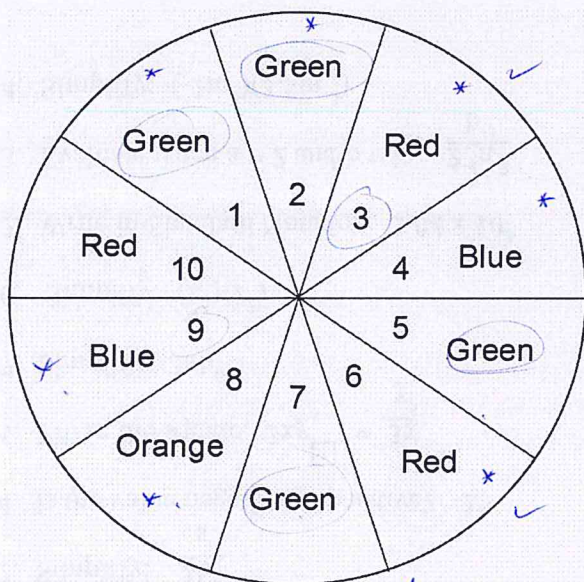
4. ABCD is a rectangle
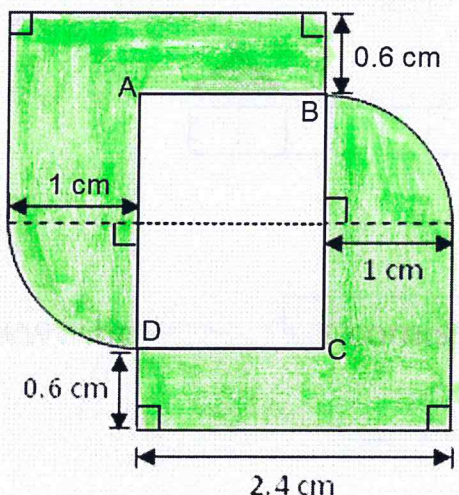
5. ABCD and EFGH are squares. $AB = 4$ in.

1

1. Use the spinner below to find each probability. Give answer as a fraction without reducing.

a) P(Green or Odd) $= \dfrac{6}{10}$

b) P(Multiple of 3 and Red) $= \dfrac{2}{10}$

c) P(Factor of 24 or Blue) $= \dfrac{7}{10}$

d) P(Prime and Orange) $= \dfrac{0}{10}$

e) P(Even | Red) $= \dfrac{2}{3}$

2. This semester the probability that you schedule a science class is $\dfrac{4}{11}$ and the probability that you schedule a history class is $\dfrac{3}{8}$. Find each probability as a percent to the nearest tenth.

a) Find the probability that your schedule for this semester contains a science class or a history class.

NOT MUTUALLY EXCLUSSIVE
You might take both classes this semester

P(Science or History)$= \dfrac{4}{11} + \dfrac{3}{8} - \dfrac{4}{11} \cdot \dfrac{3}{8} =$ $\boxed{60.2\%}$

b) Find the probability that for 1st hour you will schedule a science class or a history class.

MUTUALLY EXCLUSIVE
you can't take both classes 1st hr

P(Science or History)$= \dfrac{4}{11} + \dfrac{3}{8} = \boxed{73.9\%}$

3. In your pocket you have the following coins: 5 dimes, 4 nickels, and 3 quarters. You randomly take out a coin and put it in the vending machine, etc. Find the following probability as a fraction without reducing:
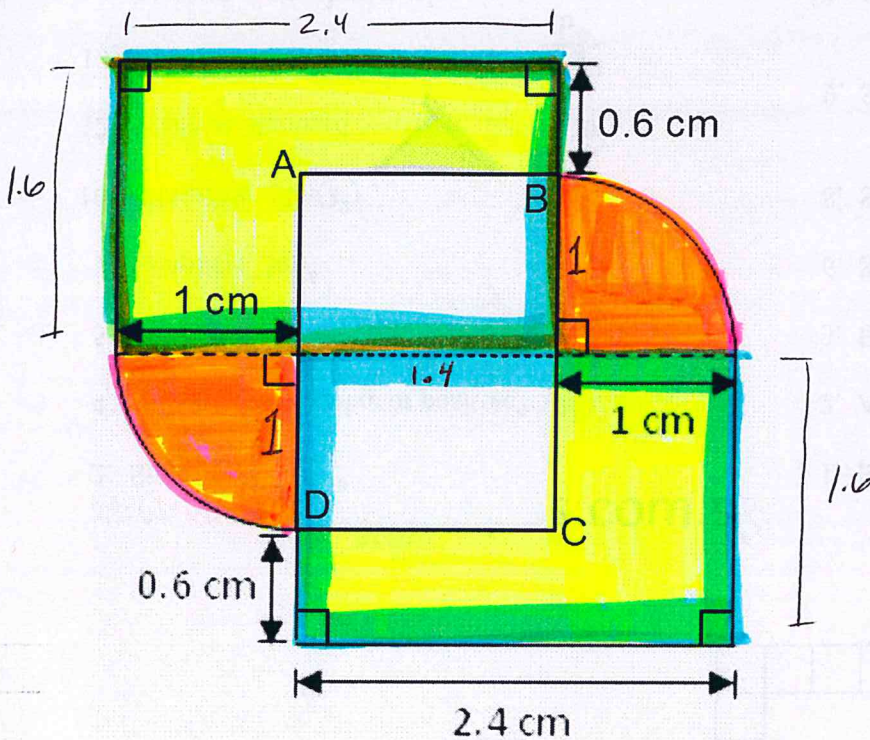
P(Quarter then Dime then Nickel then Dime) =

$$\dfrac{3}{12} \cdot \dfrac{5}{11} \cdot \dfrac{4}{10} \cdot \dfrac{4}{9} = \boxed{\dfrac{240}{11880}}$$

For 4 and 5, find the probability that a point picked at random in the figures is in the shaded region as a percent to the nearest tenth.

4. ABCD is a rectangle

Area of Target = 2 RECTANGLES + semi circle

$$2(2.4)(1.6) + \frac{1}{2}\pi(1)^2$$
$$= 7.68 + \frac{\pi}{2}$$

SHADED Area

Area of Target − Rec ABCD

$$7.68 + \frac{\pi}{2} - (2)(1.4)$$
$$= 4.88 + \frac{\pi}{2}$$

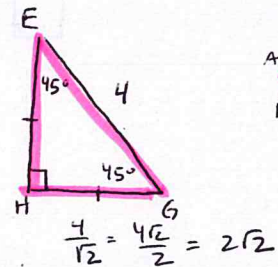$$P(\text{shaded region}) = \frac{4.88 + \pi/2}{7.68 + \pi/2}$$

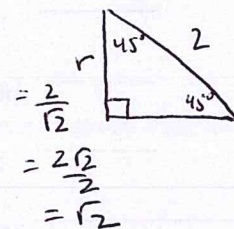$$= \boxed{69.7\%}$$

5. ABCD and EFGH are squares. AB = 4 in.
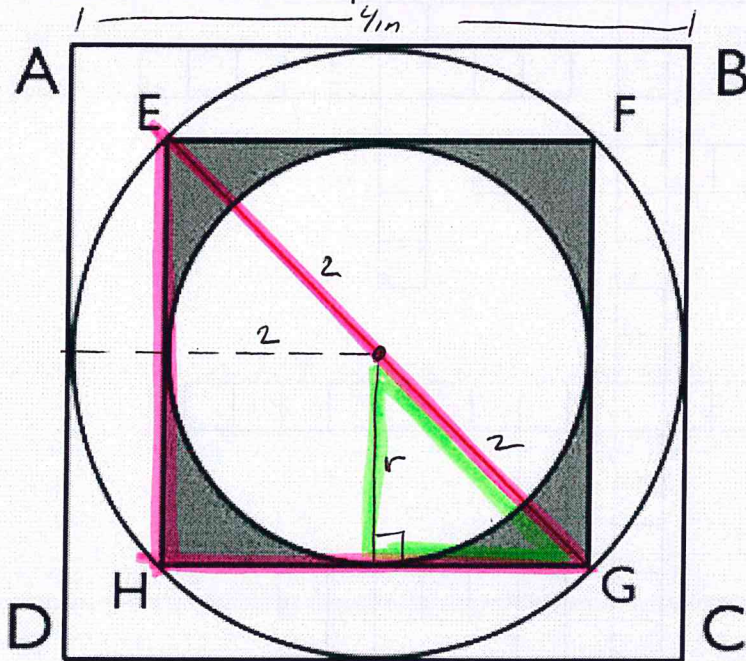
Area of Target = 16 in²

SHADED AREA = SQ EFGH − sm. circle

$$\frac{4}{\sqrt{2}} = \frac{4\sqrt{2}}{2} = 2\sqrt{2}$$

Area of sq
EFGH = $(2\sqrt{2})^2$
= 8

Area of sm circle

$$= \frac{2}{\sqrt{2}}$$
$$= \frac{2\sqrt{2}}{2}$$
$$= \sqrt{2}$$

$$\pi(\sqrt{2})^2$$
$$= 2\pi$$

SHADED AREA = 8 − 2π

$$P(\text{shaded area}) = \frac{8 - 2\pi}{16} = \boxed{10.7\%}$$

2