Session 1.1: Where are you in math? [SOLUTIONS]

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1 Ordering of real numbers

$$\frac{3}{20}, \frac{1}{6}, \frac{5}{13}, \frac{1.65}{3}, 0.6, 0.72, \frac{5}{6}, \frac{7/4}{2}$$

2 Calculating tip and interest

(a) Suppose you receive a restaurant bill for \$75. Calculate the waiter's tip . . .

    i. 11.25 or 86.25

    ii. 15 or 90

3 Rates and proportions

(a) 7 shirts

(b) 5 burritos per hour

4 Statistical thinking

(a) 500 buffalo in the population

5 Cookie-cutter geometry

(a) π or π cm^2.

(b) (i) 4π, and (ii) 16π, and (iii) 36π, and (iv) the area increases quadratically (or squared) as the radius increases linearly (or by one)

6 Geometry with a dash of rates and proportions

(b) (i) 15' shadow and (ii) $\dfrac{60'}{11} \approx 5.45'$ shadow

7 Geometry and statistical thinking

(a) Probability is $\dfrac{25}{100} = \dfrac{1}{4} = 25\%$ that you hit the inner circle