

Quiz 1

This is a two-stage quiz. During the first stage, use your knowledge & calculator to take this quiz. You have 15 min. In the second stage, you are now welcome to use your books, notes, and students in the class to retake the same quiz. You have 15 min. to write one solution (with everyone's name on it!) to be turned in for the group.

1. [3] Simplify the rational expression and write in lowest terms. $\frac{x^2 - 6x + 9}{6x - 18}$

$$\frac{(x-3)(\cancel{x-3})}{6(\cancel{x-3})} = \frac{x-3}{6}$$

factored numerator (+1)
factored denominator (+1)
reduce (+1)

Figure 1: Handwritten solution to Question 1.

Source: "WebHWA.3#1"

$$\frac{(x-3)(x-3)}{6(x-3)} = \frac{x-3}{6}$$

- factored numerator (+1)
- factored denominator (+1)
- reduce (+1)

2. [2] Perform the following: $\frac{3+2x}{(x-1)(x+3)} + \frac{4}{x+3}$

$$\frac{3+2x}{(x-1)(x+3)} + \frac{4}{x+3} \cdot \frac{(x-1)}{(x-1)}$$

$$= \frac{3+2x+4x-4}{(x-1)(x+3)} = \frac{6x-1}{(x-1)(x+3)}$$

start (.5)
common denominator (+1)
added correctly (+.5)

Figure 2: Handwritten solution to Question 2.

Source: "§A.3 #38"

$$\frac{3+2x}{(x-1)(x+3)} \cdot 1 + \frac{4}{x+3} \cdot \frac{(x-1)}{(x-1)} = \frac{3+2x+4x-4}{(x-1)(x+3)} = \frac{6x-1}{(x-1)(x+3)}$$

- start (.5)
- common denominator (+1)
- added correctly (+.5)

3. For this problem, assume 1 foot is about 30.5 centimeters,
Source "Activity Direction #1"

1. [2] convert 5 feet into centimeters.

$$5 \text{ ft} \cdot \frac{30.5 \text{ cm}}{1 \text{ ft}} = 152.5 \text{ cm}$$

number (+)
multiplier (+1)

Figure 3: Handwritten solution to Question 3, part 1.

$$5 \text{ ft} \cdot \frac{30.5 \text{ cm}}{1 \text{ ft}} = 152.5 \text{ cm}$$

- number (+1)
- multiplier (+1)

2. [3] convert 1560 cm² into square feet.

$$1560 \text{ cm} \cdot \text{cm} \cdot \frac{1 \text{ ft}}{30.5 \text{ cm}} \cdot \frac{1 \text{ ft}}{30.5 \text{ cm}} = 1.685 \text{ ft}^2$$

start (.5)
multiplier (+)
squared mult (+1)
number (+.5)

Figure 4: Handwritten solution to Question 3, part 2.

$$1560 \text{ cm} \cdot \text{cm} \cdot \frac{1 \text{ ft}}{30.5 \text{ cm}} \cdot \frac{1 \text{ ft}}{30.5 \text{ cm}} = 1.685 \text{ ft}^2$$

- start (.5)
- multiplier (+1)
- squared mult (+1)
- number (+.5)