

Key Work

B

Math 70

First Test

Fall 2011

Closed book, closed notes. No calculator.

This test has 17 questions and is worth 100 points. You may have fifty minutes to do this test.

Show all your work. A naked answer, even if correct, may not earn you full credit. If you need more room, you may use scratch paper.

1. (5 points) Simplify as much as possible: $\frac{7}{8} - \frac{3}{8} = \frac{4}{8} = \frac{1}{2}$

2. (5 points) Simplify as much as possible: $\frac{1}{32} + \frac{3}{8} = \frac{1}{32} + \frac{12}{32} = \frac{13}{32}$

3. (7 points) Simplify as much as possible: $2\frac{1}{2} + \frac{2}{3} = \frac{5}{2} + \frac{2}{3} = \frac{15}{6} + \frac{4}{6} = \frac{19}{6} = 3\frac{1}{6}$

or $2 + \frac{1}{2} + \frac{2}{3} = 2 + \frac{3}{6} + \frac{4}{6} = 2 + \frac{7}{6} = 2 + 1\frac{1}{6} = 3\frac{1}{6}$

4. (7 points) Simplify as much as possible: $\left(2\frac{1}{2}\right)\left(1\frac{1}{4}\right) = \frac{5}{2} \cdot \frac{5}{4} = \frac{25}{8} = 3\frac{1}{8}$

5. (7 points) You are going to buy a pair of shoes for \$50. If the sales tax is 9%, how much will you have to pay for the sales tax?

9% of \$50 is $(.09)(50) = 4.50$ for knowing to multiply

$$\begin{array}{r} 50 \\ 9 \\ \hline 450 \end{array}$$

You will pay \$4.50 for the sales tax

① sentence

A

6. (7 points) Simplify as much as possible: $(-2.4)(-1.7) = 4.08$

$$\begin{array}{r} 2.4 \\ 1.7 \\ \hline 168 \\ 24 \\ \hline 408 \end{array}$$

ans will be pos
(2)

4.08

7. (5 points) Simplify as much as possible: $3.6 \div 0.04 = 90$

$$\begin{array}{r} 04 \overline{) 3.60} \\ 4 \overline{) 360} \end{array}$$

(3) number
(2) decimal place

90 (2)

8. (5 points) Simplify as much as possible: $5 + (-11) = -6$

ans will be neg, since -11 has larger abs value number? subtract abs values

-6 (1) ans
(2) sign

9. (5 points) Simplify as much as possible: $12 - (-11) = 12 + 11 = 23$

3 for this
(+) sign
(1) answer

10. (5 points) Simplify as much as possible: $-2.57 + (-3.2) = -5.77$

$$\begin{array}{r} 2.57 \\ 3.20 \\ \hline 5.77 \end{array}$$

ans will be neg
(2)

-5.77 (1)

11. (8 points) The distance from the Aurora Fred Meyer to the Shoreline Library is 2,447 meters. What is this distance in kilometers? (1 kilometer = 1000 meters)

$$2447 \text{ meters} \left(\frac{1 \text{ kilometer}}{1000 \text{ meters}} \right) = 2.447 \text{ kilometers}$$

(4) know to divide by 1000
(2) number

It's 2.447 kilometers from Fred Meyer to the library.

(1) sentence (1) units

12. (7 points) Simplify as much as possible: $-\frac{12}{5} \left(\frac{2}{3}\right) = -\frac{8}{5} = -1\frac{3}{5}$

Number part:

$\frac{12}{5} \cdot \frac{2}{3} = \frac{4}{5} \cdot \frac{2}{1} = \frac{8}{5} = 1\frac{3}{5}$

(2) multiply (2) simplify (1) to mixed #

ans is neg (2)

13. (5 points) Simplify as much as possible: $-35 \div 7 = -5$

$7 \overline{)35}$ (2)

(ans is neg) (2)

14. (5 points) Simplify as much as possible: $(-2)^4 = 16$ (1)

$\rightarrow (-2)(-2)(-2)(-2)$ (ans is pos) (2)

2 trans lation 4 · 4 (2) sign

15. (5 points) Simplify as much as possible: $-4^2 = -16$ (1)

$-1 \cdot 4^2 = -1 \cdot 4 \cdot 4 = -16$

2 trans lation

16. (5 points) Simplify as much as possible: $\frac{20}{21} \div 4 = \frac{20}{21} \cdot \frac{1}{4} = \frac{5}{21}$ (2)

(3)

17. (7 points) What percent of 150 is 90? 90 is 60% of 150 -

Express $\frac{90}{150}$ as a percent know this (3)

$.6 = .60 = 60%$ (2)

$150 \overline{)90.0}$ (2)

90 0