

Practice Quiz 1
Algebra Review

MTH U121

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Show all work - Circle Answers

1. Simplify (give answer as an integer or reduced fraction): $\frac{9 + \frac{19}{6}}{\frac{19}{9} - 7} = \underline{\hspace{2cm}}$

2. Simplify: $\frac{(x^7y^{11})^2 \cdot (x^7y^2)^{-11}}{x^{-64}y^2} = \underline{\hspace{2cm}}$ and evaluate at $x = 35, y = 7$ $\underline{\hspace{2cm}}$

3. Solve for x (Hint: simplify first) $\frac{x^{\frac{19}{4}}}{\sqrt[4]{x^7}} \cdot (x^{-28})^{\frac{1}{16}} = 32$ $\underline{\hspace{2cm}}$

4. Simplify (Hint: factor first) $\frac{x^2 + 3x - 10}{x^2 - 6x + 8} \cdot \frac{x^2 - 10x + 24}{x^2 - 9x + 18} = \underline{\hspace{2cm}}$

5 Simplify the fractional expression: $\frac{-\frac{8}{x-2} - \frac{4}{x-6}}{\frac{6}{x-6} - \frac{1}{x-2}}$

6 Solve for x : $\frac{x}{x-7} + \frac{5}{-8x-6} = 1$

ANSWERS: 1) $-\frac{219}{88}$; 2) $\frac{5}{7}$; 3) $x^{5/4} = 32, x = 16$; 4) $\frac{x+5}{x-3}$; 5) $\frac{56-12x}{5x-6}$; 6) $-\frac{77}{51}$;

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7. Simplify (give answer as an integer or reduced fraction): $\frac{6 + \frac{17}{8}}{\frac{6}{5} - 13} =$ _____

8. Simplify: $\frac{(x^{11}y^{14})^6 \cdot (x^{10}y^6)^{-14}}{x^{-76}y^3} =$ _____ and evaluate at $x = 42, y = 7$ _____

9. Solve for x (Hint: simplify first) $\frac{x^{\frac{20}{9}}}{\sqrt[9]{x^5}} \cdot (x^{-20})^{\frac{1}{36}} = 9765625$ _____

10. Simplify (Hint: factor first) $\frac{x^2 - 21x + 108}{x^2 - 16x + 63} \cdot \frac{x^2 + x - 56}{x^2 + 6x - 16} =$ _____

11 Simplify the fractional expression: $\frac{\frac{4}{x+16} + \frac{17}{x+12}}{\frac{18}{x+16} - \frac{13}{x+12}}$

12 Solve for x : $\frac{x}{x-15} + \frac{12}{18-54x} = 1$

ANSWERS: 7) $-\frac{325}{472}$; 8) $\frac{36}{7}$; 9) $x^{10/9} = 9765625, x = 1953125$; 10) $\frac{x-12}{x-2}$; 11) $-\frac{21x+320}{31x+424}$; 12) $\frac{15}{133}$;