

Practice Questions (Set 2) for University of Findlay Placement Test A (Algebra Skills)

This is only a sampling of the types of questions that a student may see on the placement test.

Question 1: (1 point)

Express $\frac{x}{5y} \div \frac{2x}{3y}$ in simplest form.

(a) $-\frac{x}{2y}$

(b) $\frac{3x}{8y}$

(c) $\frac{2x}{15y}$

(d) $\frac{2x^2}{15y^2}$

(e) $\frac{3}{10}$

Question 2: (1 point)

If $f(x) = \frac{x+3}{5-x}$, then find a rational expression for $f(a+4)$.

(a) $a+7$

(b) $\frac{a+7}{5-a}$

(c) $\frac{a+7}{1-a}$

(d) $\frac{4a+3}{5-4a}$

(e) $\frac{3a-23}{a-5}$

Question 3: (1 point)

Factor the expression $x^2 - 3x + 2$.

(a) can't be factored

(b) $(x+1)(x+2)$

(c) $\left(x - \frac{3}{2}\right)^2$

(d) $(x-1)(x-2)$

(e) $(x-3)(x-2)$

Question 4: (1 point)

Find the exact value of the expression $(32)^{2/5} + (16)^{1/4}$.

- (a) $\frac{1044}{5}$
- (b) 8
- (c) 6
- (d) $\frac{9}{32768}$
- (e) $\frac{84}{5}$

Question 5: (1 point)

Find the equation of the line parallel to the line $x + y = 1$ and passing through the point $(2, -4)$.

- (a) $y = x - 2$
- (b) $x + y = -2$
- (c) $x + y = -\frac{9}{2}$
- (d) $y = 2 - x$
- (e) $x - y = 6$

Question 6: (1 point)

Find a number b for which $|(x - 7)| = |x - b|$.

- (a) 14
- (b) -7
- (c) not possible
- (d) 0
- (e) 7

Question 7: (1 point)

If x , y , and z are positive real numbers, find w for which $\log(w) = \log(x) - \log(y) + 3 \log(z)$.

- (a) $w = \frac{x}{yz^3}$
- (b) $w = x - y + 3z$
- (c) $w = \frac{3xz}{y}$
- (d) $w = \frac{xz^3}{y}$
- (e) $w = \frac{x}{3yz}$

Question 8: (1 point)

If $f(x) = x^2 + kx + (1 - k)$ and $f(3) = 8$, then find a value for k .

- (a) $k = 8$
- (b) $k = 26$
- (c) $k = -1$
- (d) $k = -7$
- (e) $k = \frac{7}{2}$

Question 9: (1 point)

Of the following, which best represents the graph of the region that corresponds to the inequalities $0 \leq y \leq 3$ and $x \geq 0$?

