

SKILLS LIST and SAMPLE ITEMS

FOR

**PRACTICE TEST FOR MATH
(ALGEBRA I EXIT EXAM), GRADE 10**
(Test items developed for skills measured in OCCT)

Skills

- | | |
|---|-------------------------------------|
| 1.0 Number Sense and Algebraic Operations | 3.0 Data Analysis and Statistics |
| 1.1 Translate Expressions/Equations | 3.1 Data Representation/Predictions |
| 1.2 Expressions | 3.2 Line of Best Fit |
| 2.0 Relations and Functions | |
| 2.1 Relations/Functions | |
| 2.2 Graph Transformations | |
| 2.3 Calculate Slopes | |
| 2.4 Equation of a Line | |
| 2.5 Interpret Slope | |
| 2.6 Equations/Inequalities | |
| 2.7 Systems of Equations | |
| 2.8 Problem Solving | |

Number of questions: 53
Number of pages: 13

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(OVER)

OCCT PRACTICE TEST IN MATH (ALGEBRA I EXIT EXAM) - GRADE 10

1. Simplify the following.

$$(a^2a^3)^4$$

- A. a^9
- B. a^{24}
- C. a^{10}
- D. a^{20}

2. When the quotient of a number and 5 is increased by 3, the final result is 4 less than twice the number. Which equation represents the previous sentence?

- A. $\frac{5}{y} + 3 = 4 - 2y$
- B. $\frac{y}{5} + 3 = 2y - 4$
- C. $5y + 3 = 2y - 4$
- D. $\frac{y}{5} + 3 = 2(y - 4)$

3. Which set of data does not represent a linear relationship?

A.

x	2	4	6	8	10
y	6	8	12	16	20

B.

x	1	2	3	4	5
y	$-\frac{1}{2}$	0	$\frac{1}{2}$	1	$\frac{3}{2}$

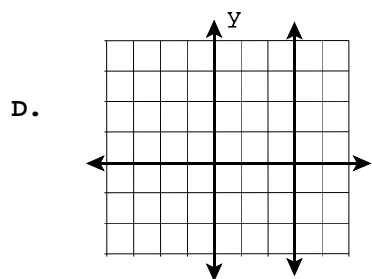
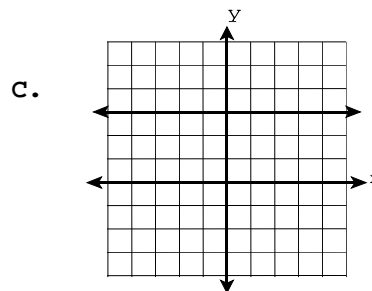
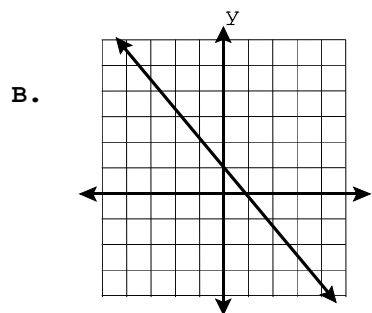
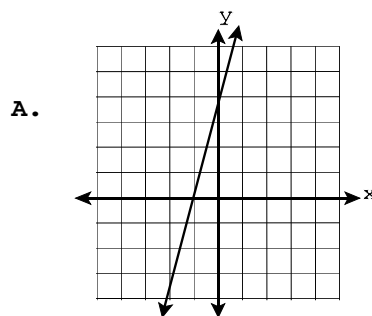
C.

x	2	4	6	8	10
y	2	14	30	58	90

D.

x	1	3	5	7	9
y	3	-1	-5	-9	-13

4. Which of the following has a positive slope?



5. If $x = -2$ and $y = 3$, evaluate the following expression.

$$x^2y^3 + x$$

- A. 106
- B. 108
- C. 9
- D. 11664