

Are You Ready for Physics AP 1?

Self-Assessment Test

1. Computational Skills

- (a) $\frac{\sqrt{540}}{\sqrt{15}}$
- (b) Round $\frac{6.67 \times 10^{-11} \times 5.97 \times 10^{24}}{(6.36 \times 10^6)^2}$ to the nearest tenth.
- (c) $\frac{16^{60} \times 3^{123}}{(12^{60})^2}$

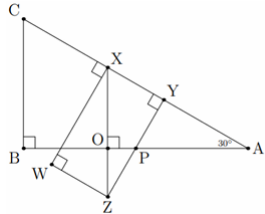
2. Algebra Skills

- (a) Solve for r in terms of the other variables: $\frac{v^2}{r} = G \frac{M}{r^2}$
- (b) What is the vertex of $3x^2 - 6x - 9$?
- (c) Solve $3x^2 - 6x - 9 = 0$.

3. Coordinates and graphs

- (a) Find the equation of the line that is perpendicular to $y = 2x + 5$ and has the same x -intercept as $3x - 4y = 12$.
- (b) Find the equation of the parabola with vertex $(1, 2)$ that passes through $(3, 6)$.

4. Geometric Skills



- (a) Consider the diagram above, find the measurements of $\angle WXZ$.
- (b) Consider the diagram above. If P is the midpoint of segment YZ , find the ratio $\frac{XY}{OP}$.
5. Amelia drew a circle with a radius of 10 cm, label her circle's circumference C_A . Bob drew a circle with a radius of 11 cm, label his circle's circumference C_B . Chris drew a circle with a radius of 100 cm, label his circle's circumference C_C . Diana drew a circle with a radius of 101 cm, label her circle's circumference C_D . Calculate $(C_D - C_C) \div (C_B - C_A)$.