BECA/Huson/Geometry: Construction First and last name:
16 September 2024 Section:

1.7 Do Now: Powers, radicals, constructions

1. Memorize the single digit powers. *3.OA.7 Fluently multiply and divide within 100*

   (a) $3^2 =$

   (b) $6^2 =$

   (c) $5^2 =$

   (d) $9^2 =$

   (e) $4^2 =$

   (f) $2^3 =$

2. Memorize the square roots of whole numbers through 100 and cubes through five.

   (a) $\sqrt{9} =$

   (b) $\sqrt{47} =$

   (c) $\sqrt{64} =$

   (d) $\sqrt{36} =$

   (e) $\sqrt[3]{8} =$

   (f) $\sqrt[3]{27} =$

3. Perform each calculation, write down the full calculator display and then round to the *nearest hundredth*.

   (a) $A = 15.944732$

   (b) $W = 3.4 \times 9.8 \times 4.3 \times 0.15$

   (c) $V = \frac{1}{3}\pi(3.4)^2(6.1)$

   (d) $V = 199.19711$

4. Simplify each expression by "collecting like terms"

   (a) $2x + 4 - x + 11$

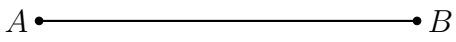
   (b) $5y - 4 - 7y + y$

   (c) $14 + 5\pi - 2\pi + 4$

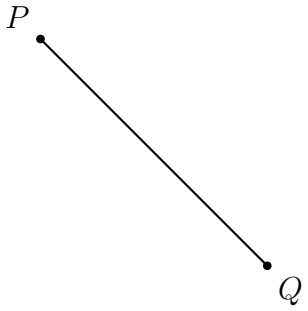
   (d) $2a - 7a + 3\sqrt{5} + \sqrt{5}$

Constructions: Use only a compass and straightedge

5. Construct an equilateral triangle with one side $\overline{AB}$. [Leave all construction marks.]



6. Construct a perpendicular bisector the given line segment $\overline{PQ}$. Label the midpoint of $\overline{PQ}$ as M. Mark the right angle with a small square and hash marks on the two congruent segments.



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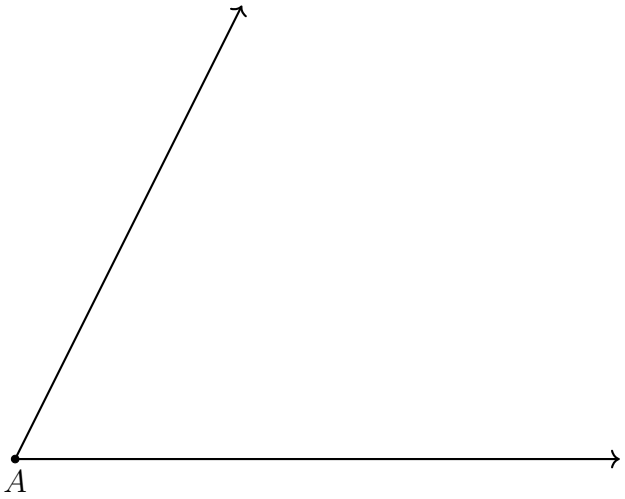
7. Construct an angle bisector the given angle A. [Leave all construction marks.]



Spicy: Construct a hexagon inscribed in a circle

8. Construct an equilateral triangle on $\overline{AB}$ by drawing a circle centered on A. Continue with a second equilateral triangle on $\overline{AC}$ by drawing a circle centered on C. Work around the circle B four more times to construct the hexagon.