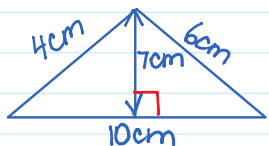


Review

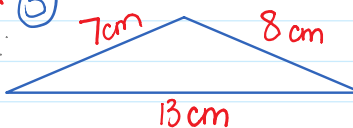
① Calculate area & perimeter



$$\text{Area } \Delta = \frac{b \times h}{2} = \frac{10 \times 7}{2} = 35 \text{cm}^2$$

$$P = 6 + 4 + 10 = 20 \text{cm}$$

★ ⑤ Find the area using Heron's Law:



$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

where s = half the perimeter

$$\begin{aligned} A &= \sqrt{14(14-7)(14-8)(14-13)} = 24.2 \\ &= \sqrt{14(7)(6)(1)} \\ &= \sqrt{588} = 24.24871... \\ &= 24.2 \end{aligned}$$

Full P = 28cm
S = 14cm

② $\sqrt{36} = 6$

③ $\sqrt{0.49} = 0.7$

④ $2(3+4)^2 + 8 \div 2$ **BEDMAS**

$$= 2(7)^2 + 8 \div 2$$

$$= 2(49) + 8 \div 2$$

$$= 98 + 8 \div 2$$

$$= 98 + 4$$

$$= 102 \checkmark$$

Exponent Laws

Multiplying Exponents: $a^m \times a^n = a^{m+n}$

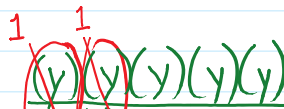
eg 1) $n^7 \times n^2 = n^{7+2} = n^9$ WHY? $\underbrace{(n)(n)(n)(n)(n)(n)(n)}_{n^7} \times \underbrace{(n)(n)}_{n^2}$

2) $(-7)^6 \times (-7)^{-4} = (-7)^{6+(-4)} = (-7)^2$

Dividing Exponents: $a^m \div a^n = a^{m-n}$

3) $y^5 \div y^2 = y^{5-2} = y^3$ WHY?

WHY?



4) $2^3 \div 2^6 = 2^{3-6} = 2^{-3}$

Evaluating Expressions

⇒ Always simplify first (if possible)

put brackets in calculator

eg 5) $(-2)^4 \times (-2)^7 = (-2)^{4+7} = (-2)^{11}$ = calculator

6) $3^2 \times 3^4 \div 3^3 = 3^{2+4-3} = 3^3 = 27$



$$= -2048 \checkmark$$

$$\begin{aligned}
7) & (-10)^4 [(-10)^6 \div (-10)^4] - 10^7 \\
& = (-10)^4 [(-10)^{6-4}] - 10^7 \\
& = (-10)^4 [(-10)^2] - 10^7 \\
& = (-10)^{4+2} - 10^7 \\
& = (-10)^6 - 10^7 \\
& = +1\,000\,000 - 10,000,000 \\
& = \boxed{-9\,000\,000} \checkmark
\end{aligned}$$

Assignment: UIL2 wkst 1-4: (A), (C), (E), (G) #5, 6, 7, 8 (A), (C), (E), (G)