|  |  |
| --- | --- |
| There is a mathematician within each of us. | Experiences with models for math concepts help us understand, invent, and remember important math ideas. |
| Learning math is a social activity. | Learning math is an ongoing process of knowledge construction. |
| “Disequilibrium” is a sign of new learning. | Mathematics is a fascinating world of its own. |
| The world of mathematics connects to many other worlds. | Effective Teachers are those who can stimulate students to learn mathematics. Educational research offers compelling evidence that students learn mathematics well only when they construct their own mathematical understanding.*-Everybody Counts*National Research Council |
| Instead of a teacher-proof textbook, the model class of the future would have a textbook-proof teacher, which is to say, one who knows the subject so thoroughly that the textbook is almost a reference book.-Chester Finn in *Wall Street Journal,* 2/9/90 | Over the long term, basic skills only give you the right to compete against the Third World for Third World wages.-Mark S. Tucker |
| We can teach, and teach well, without having the students learn. | People who don’t want to learn usually don’t; People who want to learn may. |
| When placed in a stimulating environment with enthusiastic people, some who think they don’t want to learn change their minds. | Active students learn more than passive students. |
| If students are going to persist in a learning activity, the activity must lead to some satisfaction. | There are two common explanations:1. These students are stupid.
2. They aren’t ready to learn.
 |
| Knowledge is seldom transferred intact from the mind of the teacher to the mind of the learner. | No one in the classroom learns more than the individual teaching the course for the first time. |
| We only think when we are confronted with a problem.*-John Dewey* | Actually, the good news is that great minds don't always think alike. – *Goldman Sachs* |
| When one teaches, two learn.– *Robert Half*  | Believe in kids and they will, flat out, amaze you.-John A. Van de Walle |
| Mathematics is no more computation than typing is literature.**- John Allen Paulos** | Obvious is the most dangerous word in mathematics.-E.T. Bell |
| Pedagogy, like language itself, can either liberate or imprison ideas, inspire of suffocate constructive thinking.**- Hyman Bass**, from “Mathematicians as Educators” | It is the duty of all teachers, and of teachers of mathematics in particular, to expose their students to problems much more than to facts.**- Paul Halmos** |
| The teacher who is attempting to teach without inspiring the pupil to learn is hammering on cold iron.**- Horace Mann** | We encourage children to read for enjoyment, yet we never encourage them to “math” for enjoyment. We teach kids that math is done fast, done only one way and if you don’t get the answer right, there’s something wrong with you. You would never teach reading this way.**- Rachel McAnallen, from “Math?  No Problem”** |
| Children need to do what “real” mathematicians do – explore and invent for the rest of their lives.**- Susan Ohanian**, fromGarbage Pizzas, Patchwork Quilts and Math Magic | Unless we want mathematics to continue to be viewed as something distinct and separate from the mainstream of culture and consisting of a bag of clever tricks or skills, we must change the way we relate to the general public and the way we teach mathematics.**- Harald M. Ness, Jr.**, in “Mathematics: an integral part of our culture”, |
| Mathematics is much more than computation with pencil and a paper and getting answers to routine exercises. In fact, it can easily be argued that computation, such as doing long division, is not mathematics at all. Calculators can do the same thing and calculators can only calculate – they cannot do mathematics.- **John A. Van de Walle** | One of the big misapprehensions about mathematics that we perpetrate in our classrooms is that the teacher always seems to know the answer to any problem that is discussed. This gives students the idea that there is a book somewhere with all the right answers to all of the interesting questions, and that teachers know those answers. And if one could get hold of the book, one would have everything settled. That's so unlike the true nature of mathematics. –Leon Albert Henkin |
| Learning to solve problems is the principal reason for studying mathematics.-Position Paper on Basic Mathematical Skills. National Council of Supervisors of Mathematics, 1977 | It is clear that the chief end of mathematical study must be to make the students think. -John Wesley Young |
| He who dares to teach must never cease to learn.-Adage | It isn't enough just to learn—one must learn how to learn, how to learn without classrooms, without teachers, without textbooks. Learn, in short, how to think and analyze and decide and discover and create.-Michael Bassis; American educator and author |